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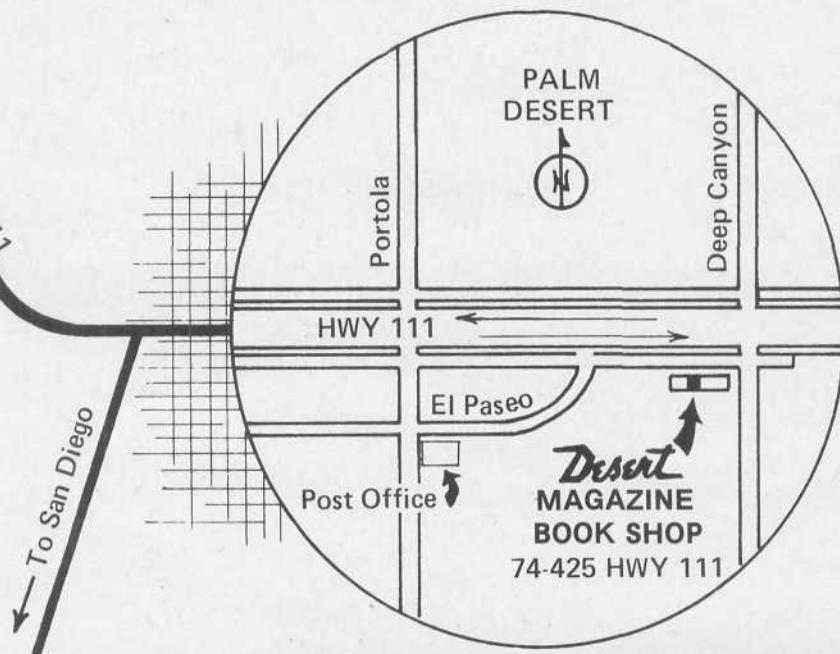
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THE COVER:
A lonely tributary of Palm Canyon just a few miles from the bustle of Palm Springs, California. The Mountain Station of the Aerial Tramway is just above the "er" of the logo. Photo by George Service, Palm Desert, California.

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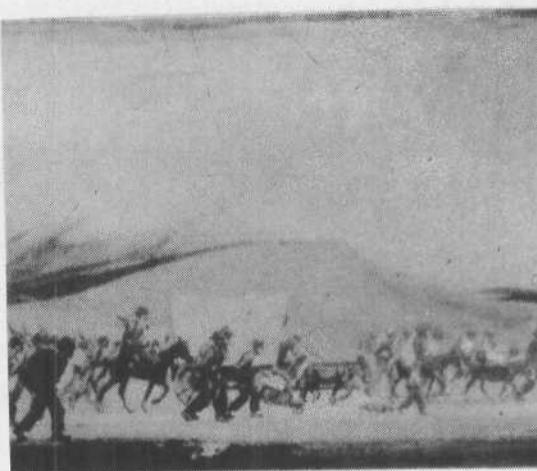
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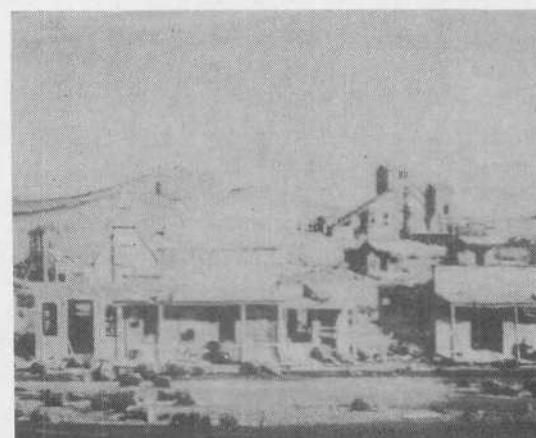
The Gold Rush



The Mining Camp



The Mining Town



The Ghost Town

A Peek in the Publisher's Poke

The following is an important notice for all rock collectors from our Field Trip Editor, Mary Frances Strong.

"We have received a letter from W. R. Brubaker advising he has a claim in the picture rock area ("Hidden Dunes, Desert, November 1977) and does not allow collecting on said claim.

"When we visited this area it was not posted. We did not observe any claim markers, discovery monument or any signs of mining activity.

"This locale has been a popular collecting area since at least 1954. Clubs and individuals have scheduled field trips and detailed maps to the site have been published in club bulletins.

"It was certainly not our intent to direct anyone to a private claim. We advise our readers not to trespass within the boundaries of the Brubaker Claim. Mr. Brubaker has claimed 750 feet north and 750 feet south of a discovery monument; and 300 feet both east and west of said monument.

"Since Mr. Brubaker does not want

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collectors on his claim, it can be assumed that markers, as required by law, are now in place."

This month we again spotlight Southern California's Coachella Valley where the opportunities to enjoy all the great features of the desert are seemingly endless.

Bill Jennings extolls on some of the Valley's fantastic campground and recreational activities available to visitors, and, of a more rugged nature, Jerry Schad recalls a 40-mile backpack trip through the wilderness area of the Santa Rosa Mountains that rim the Valley.

A tremendous bonus is a 16-page supplement on The Living Desert Reserve, a wonderful development located in Palm Desert that is staffed by dedicated people at every level. If you haven't already seen the Reserve, you'll want to set aside time for a visit after reading their story.

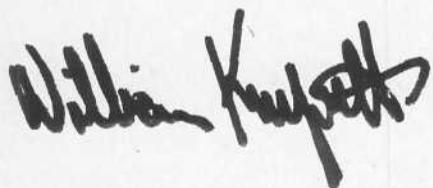
Moving over to Arizona, an unusual "snake dance" was captured on film by a couple traveling in Organ Pipe Cactus National Monument. Ernest Bird told his story to James Brady, who gratefully sent it along to *Desert Magazine*.

Arizona is also the site of Geronimo's surrender in Skeleton Canyon, as described by Lee Coe.

Other items which we hope you will find interesting in this issue include date recipes by Helen Peterson; another palm oasis is revealed in Dick Bloomquist's palm oasis series; Mary Frances Strong waxes about "The Valley of Little Smokes," one of her favorite spots in Nevada, and Howard Neal pays tribute to Julian, California in his ghost town series.

We are proud to welcome Stephen J. Hubbell as our featured Western ARtist this month, and last, but not least, John Southworth, in his usual humorous manner, retells the story of the seagulls and the Mormon pioneers—with a little update!

Happy reading and happy touring!



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By Lt. R. W. H. Hardy, R.N.

This is one of those previously almost
priceless, and exceedingly rare, books
that most Mexican travel buffs could
only glimpse in a collector's glass case,
until Rio Grande Press came out with a
handsome reprint this year.

Thanks to the miracles of modern
lithography, even the ancient type faces
and woodcut illustrations are as crisp to-
day as when the book first appeared in

London in 1828. The publisher's preface
outlines the difficulties Rio Grande's
Bob McCoy encountered in the technical
reproduction process.

Classic or not, Hardy's account of
early travel to the Peninsula is valuable
as a curiosity. His voyage by small boat
precluded any penetration of the interior
of the spiny barrier between the Pacific
Ocean and Gulf of California.

Hardy left his family's name on the
delta tributary of the Colorado River, Rio
Hardy, but made no other impression on
either the Baja geography or its written
history. He came as a trained observer
for the London-based General Pearl and
Coral Fishery Association, with some ap-
parent fluency in Spanish but only a brief
residence in mainland Mexico.

His professional background, as a
Royal Navy officer and in later days an
astronomer, did not prepare him for the
rugged life of an overland explorer.
However, he was a good student of
human nature, had a latent talent for
political intrigue and therefore left us
with a unique view of the newly-indepen-
dent nation of Mexico.

Only an index, the publisher's preface
and an all-important scholar's introduc-
tion have been added to this 1977
edition. The introduction, by David J.
Weber of Southern Methodist Univer-
sity, places Hardy accurately at the van
of a number of foreign visitors who left
written accounts of their impressions of
the new nation.

Hardy was the first of these to tour
much of Sonora and Baja California and
his impressions are therefore most im-
portant to any student of northwestern
Mexican history. Particularly is this true
of his descriptions of Indian life in the
Colorado River delta region, where his
small sailing craft was beached for sev-
eral days.

His description of the delta, and its
aboriginal inhabitants, provides the first
English-language account of this remote
region, and, indeed, it appears he was
the first non-Spanish visitor. Hardy's
vivid account of his first encounter with
the Colorado's fearsom tidal bore also is
considered a classic.

All in all, the Hardy book offers both
historic and contemporary value to the
reader and the handsome reprint is
worthy of a spot on anyone's bookshelf.

Hardcover, sparsely illustrated, with
one excellent map, 558 pages, \$20.00.



**CAMP AND CAMINO
IN LOWER CALIFORNIA**
Explorations and Adventures
on the Baja: 1908-1910
By Arthur W. North

This handsome new edition from Rio Grande Press is an old favorite of Baja California aficionados dressed up with new illustrations by Michael Mathes, member of the University of San Francisco faculty and director of the historic archives for the Mexican state of Baja California Sur.

The combination is rewarding, for North's crisp description of a Baja he toured widely 70 years ago is accompanied by a handful of historic black and white photos. Dr. Mathes' 72 color prints complement the older pictures and offer a contrast in the rapidly changing profile of the long peninsula that was a federal frontier territory during North's tours and is now divided into two autonomous states.

North has an importance to all Baja buffs. He was among the first North Americans to do more than hit the traditional towns, Ensenada and La Paz, below the border fleshpots of Mexicali and Tijuana. He offers a graphic description of the land and its people; its geography and wildlife that is as vivid in 1978 as it was when written.

North was a professional writer and an amateur naturalist—anthropologist, explorer and historian. A natural for a travel writer!

As a result his observations are as valuable today as when they were gathered on muleback and coastal boat in 1905 and 1906. His experiences also appeared in travel magazines of the day and provided a model of accuracy and colorful description for many more famous writers who produced Baja books in more recent times.

For those adventurers who have driven the length of Baja California in

Model T Fords and even four-wheel-drive rigs, North's accounts of personal travel adventures make exciting fare. To those current visitors who find the two-lane peninsular highway too narrow for their motorhomes, his matter-of-fact descriptions and incredible journeys must be nearly impossible to believe.

This is one of the book's major values today. It offers the best, and possibly the first account of travel into the back corners of Baja that even the modern motorist can find invaluable because he knew where the passes were, where you could get dependable guides and food supplies and even today this information is vital, once you get out of sight of the main roads and principal towns.

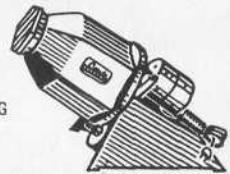
North's *Camp and Camino* is the 115th member of Rio Grande's Classic reprints, a notable contribution to the history book shelf of the American Southwest. With the addition of Mathes' comparative photographs, showing the "after" to go with North's "before" black and white prints, the book becomes invaluable.

Hardcover, 130 photos, 346 pages, \$20.00.

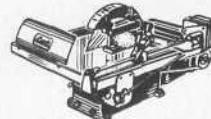
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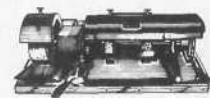
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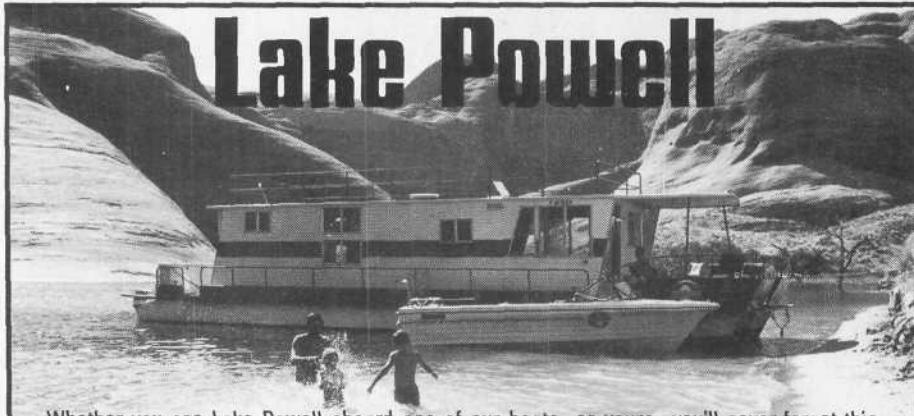


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A WILDERNESS

In The Santa Rosa Mountains

by JERRY SCHAD

ONE OF my favorite pastimes during the long, hot summer months is to unroll a set of topographic maps on the living room carpet and plan hiking trips for the following winter, or to relive past desert journeys.

A swirling pattern of lines on the maps now before me represents the contours of eroded, steep-sided slopes and ravines in the Santa Rosa Mountains of Southern California. Colored shadings give some indication of the exceptional variety of vegetation types found here—everything from forest and scrub at the highest elevations, to a virtual absence of ground cover on the sun-scorched desert floor at the base of the range. Broken

blue lines also appear on the maps, providing a good picture of drainage patterns. Significantly, symbols representing human habitations or man-made structures are lacking over most of the area depicted.

On these maps, I trace an additional detail—a thin pencil line that meanders from one end of the Santa Rosa Mountains to the other—and recall again the circumstances associated with that particular trip.

The summit ridge of the Santa Rosa Mountains stands high above the desert floor, seldom penetrated by human and home of one of the last big herds of desert bighorn in the West. Few places

in California adhere to the definition of wilderness more closely. On viewing this ridge from a distant vantage point above Borrego Springs one day, I was struck with its apparent continuity. I wondered—could there be a natural pathway for travel along the ridge from Toro Peak, the crown of the range, to the low-desert sands of the Borrego Badlands some 20 air-miles southeast? No guidebook, or even a detailed map could hope to answer this question to my satisfaction. Only experience would settle the issue.

Late winter was the season. On a cold, blustery morning my companion and I crawled sleepy-eyed from the warm comfort of our down-filled bags. Our campsite in a snow-free patch on the shoulder of Toro Peak allowed us to gaze southward over the rugged spine that leads deep into Anza-Borrego country. No sign of the works of man was discernible, except the checkerboard pattern of irrigated fields in Coachella Valley and Borrego Valley, 8,000 feet below us.

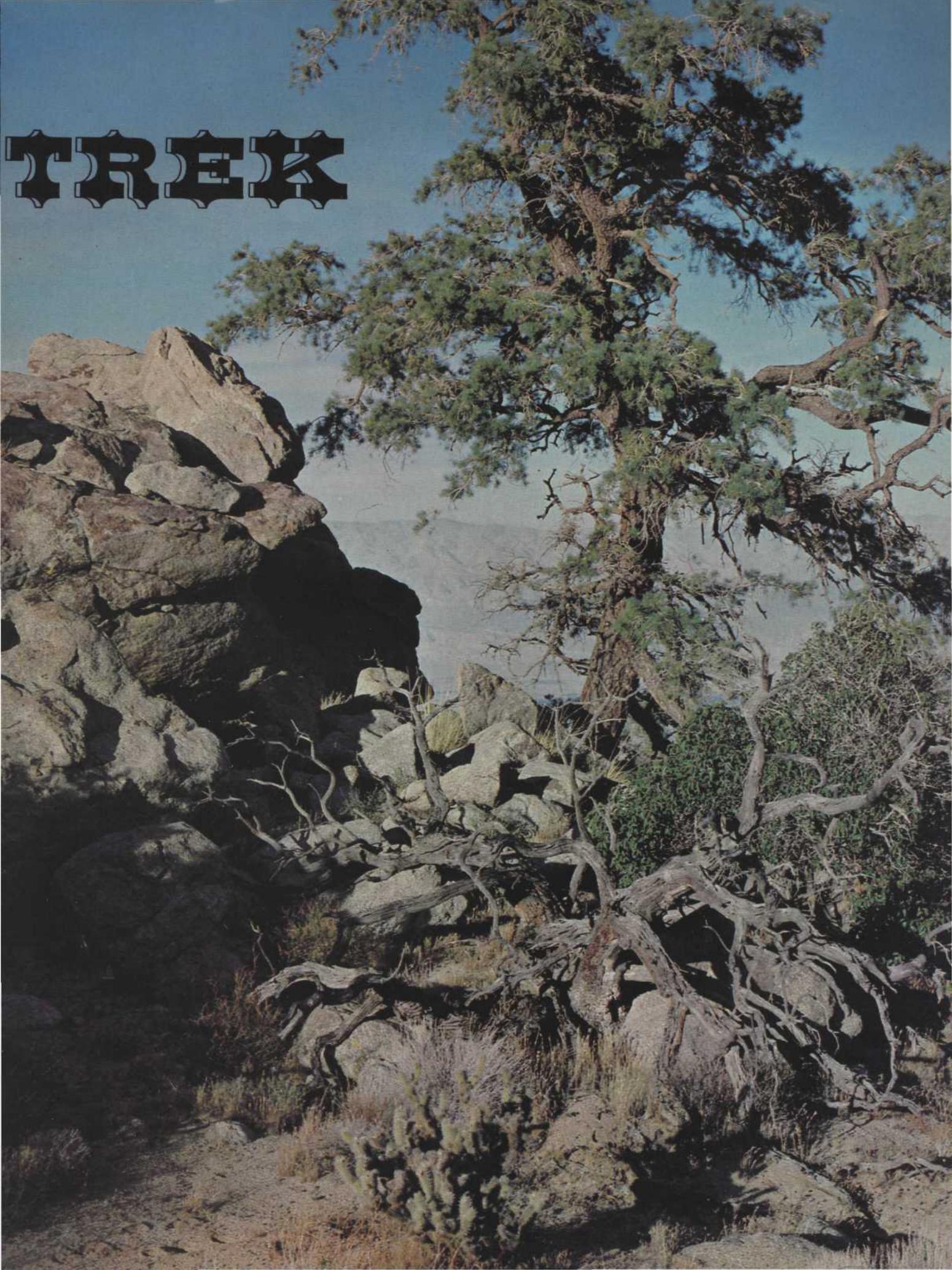
My friend would return to the car we had left parked along Palms-to-Pines Highway the previous afternoon. But for me, a continuous stretch of primitive wilderness lay ahead, inhabited only by rattlesnakes, coyotes, bighorn and small desert rodents. I faced the sun to begin 27 miles of trackless, solo hiking along one of California's most spectacular escarpments.

I was equipped with the usual backpacking items—sleeping bag, high-carbohydrate foods, first-aid and warm clothing—plus five pounds of camera gear. More importantly, however, two gallons of water were stowed in plastic containers in anticipation of lack of available water for the remainder of the hike.



Left: The cairn at Peak '6582.' Opposite page: A hardy pinyon at the 4,000-foot elevation. Color photo by George Service, Palm Desert, Calif.

TREK



My immediate destination that morning was the area known by some as Alta Seca Bench (or Flat), about 500 feet below. Faint jeep tracks led down through the high-elevation mixed forest of pine, fir and cedar to a gently rolling landscape of Jeffrey pine and granitic rock outcroppings. An old Indian trail, I'm told, descends the steep southwestern slope of the bench to the old Santa Rosa Village ruins at the head of Rockhouse Canyon. I could find no trace of it, though it is doubtless overgrown on the upper end.

Manzanita and scrub oak impeded my progress as I moved southeast along the bench. Out in the open now, only an occasional Jeffrey pine dared brave the elements. Appearing half-dead with limbs spread back in a gesture of defiance against the prevailing survivors at the extreme limit of their habitat. At this point, the transition to the "high" desert, devoid of tall trees, was nearly complete.

I looked back at Toro Peak which, in spite of its 8,716-foot elevation, had shrunk to a modest dimple on the landscape. Rabbit Peak, a 6,666-foot hogback rising in the southeast about 10 miles away, would now serve as an identifiable marker for my forward progress along the ridge.

Beyond Alta Seca Bench, the watershed divide drops sharply to a pinyon and juniper biotic community. What was shown as a mildly undulating ridge line (or so I thought) on the topo maps turned out in reality to be uneven terrain infested with brush thickets and punctuated by gigantic boulders. Sometimes the appearance of a small rock cairn or duck (small stone placed on top of a larger stone) guided me through the rough

spots. Other times, considerable backtracking was required to ferret my way past obstacles. I discovered that, upon looking back, hindsight often revealed some easier path down a hillside—a route that was otherwise invisible.

As the day warmed up, I began whistling loudly and thrashing about in the brush in an effort to alert rattlesnakes, real or imagined, of my presence. (It's not surprising, then, that I saw little of any kind of wildlife that day.)

Airy vistas, encompassing nearly all of the Colorado Desert, unfolded atop every peak. Equally impressive, however, were the passages across the "troughs" or saddles connecting the high points of the ridge. Here, at the heads of two opposing canyons, the mountain slopes reach their steepest gradients.

In late afternoon, a high point was reached about halfway between Toro and Rabbit—an unnamed peak labelled "6582" on the topo. I was astonished to discover a free-standing, six-foot tall pillar of stones on the summit. Could this be a relic of the Indian days, or a more recent monument? Below the cairn, in a metal band-aid case, was a small notebook placed there in 1971—after the cairn was built according to the first entry. Four parties had passed this way since then, including one pair of mis-adventurers who had spent two days groping along the ridge from Toro Peak in snow and fog. Their last remark was "Hope we make it!"

Before leaving, I added my equivalent to "Kilroy was here" in the register. By this time a gusty northwest wind had arisen, and clouds of dust kicked up from Clark Dry Lake could be seen billowing



hundreds of feet into the air over the Borrego Badlands.

Two hours later the wind was battering the ridge-top at velocities approaching 60 miles per hour, and the normally stiff and immovable branches of the pinyon pine were swaying to and fro accompanied by a roaring noise. By keeping to the left (leeward) side of the ridge, I was able to avoid the worst of the gusts.

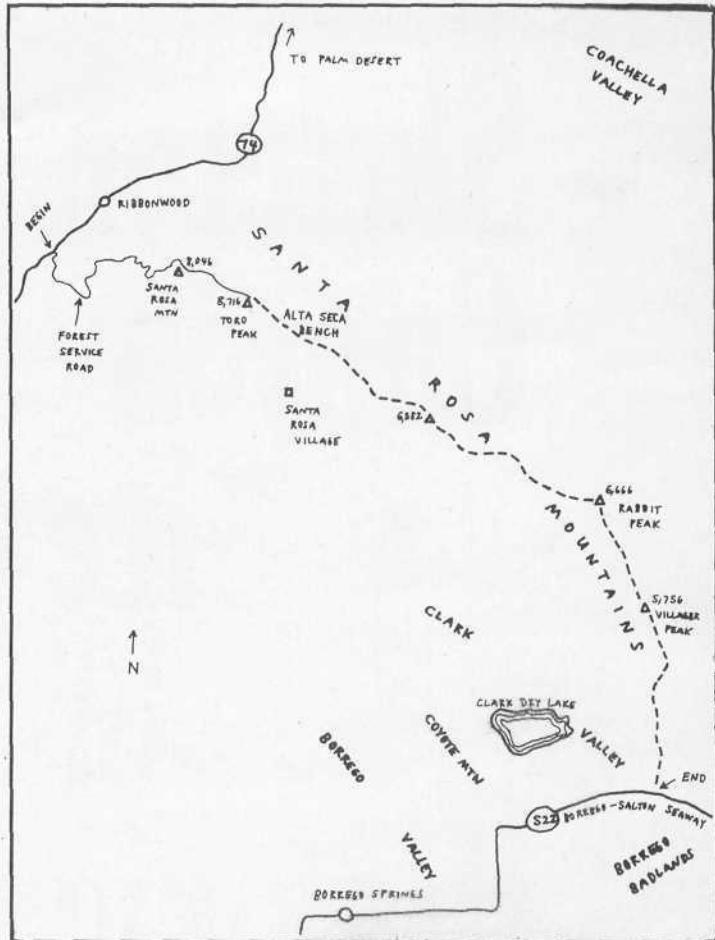
The plethora of obstacles facing me—boulders, impenetrable patches of manzanita and scrub oak, and the ubiquitous Spanish dagger—was a deterrent to my expectations as well as my progress. My original plan to camp near Rabbit Peak was abandoned following a particularly nasty episode where one hour of bouldering and bushwacking yielded only one-half mile of forward progress. I settled



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View from Toro Peak, looking northeast across the Coachella Valley.



instead for a nicely-protected flat spot well below the ridge top, two and one-half miles short of my goal.

Awakening at 5:30 next morning, my legs were not quite ready for the task that awaited them; nevertheless I was hopeful that with an early start I would complete the hike in time for my rendezvous with transportation in the Borrego Badlands that afternoon. The wind had ceased blowing overnight, and a sky of purest azure overhead allayed my fears of a rain- or snowstorm. Gaining the ridge again by sunrise, I could see the flat-topped profile of Rabbit Peak ahead, and the tortuous path between.

Two hours later put me on the chilly summit. I stood reading through scrawled entries logged in the register. Most

Continued on Page 62

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Skeleton Canyon- Site of Historic Surrender

by LEE COE

ATA turnout on Highway 80 that runs along the east side of the Chiricahua Mountains to Douglas, Arizona, is an historical marker briefly describing the surrender of Geronimo, legendary Apache Chief, to the United States Army. This final act in the war against the Apaches took place in Skeleton Canyon, a few miles east of the highway.

We continued south a short distance along the highway and then turned onto a graded dirt road that meandered in the general direction of the Peloncillo Mountains. At the mouth of Skeleton Canyon is a cattle ranch. Three gates farther up the canyon the road ends. Leaving the car, we walked along the rocky streambed, dry and hot in the summer sun but

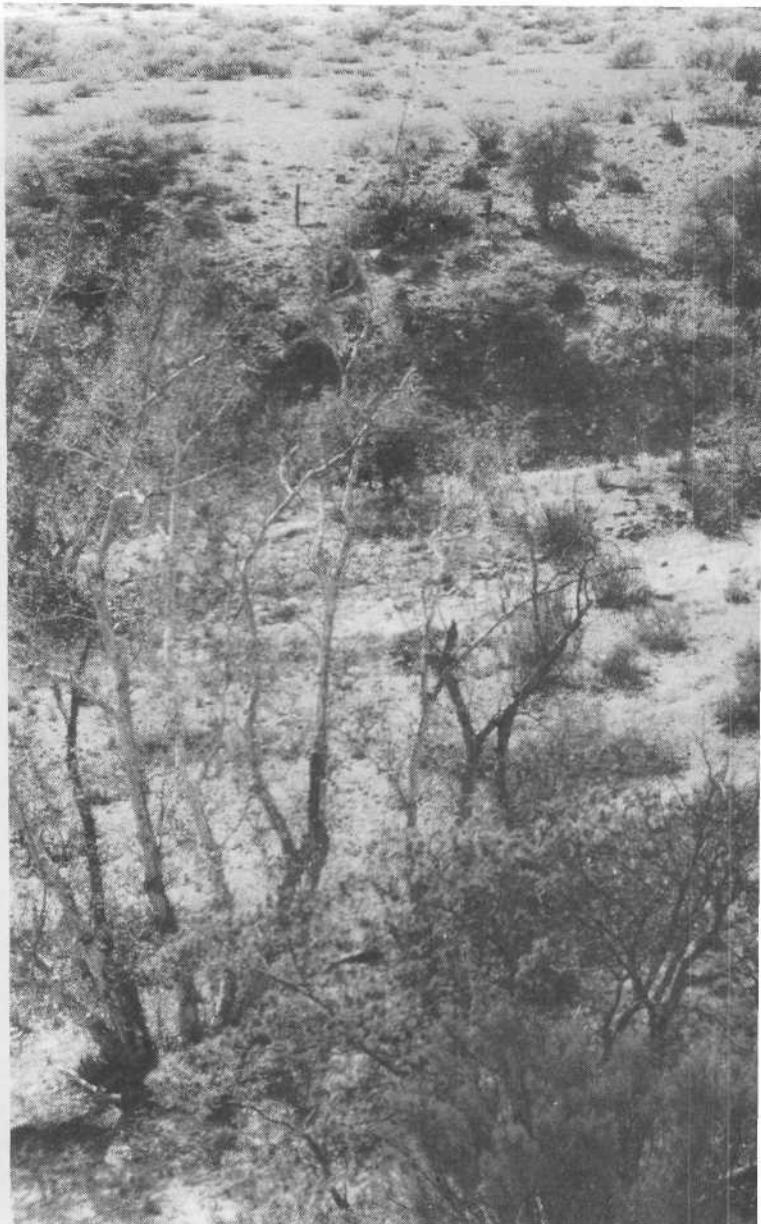
full of rushing waters in more propitious times. Ahead the canyon opened wide and split in two, each new branch narrowing once more as it led its separate rugged way into the heart of the Peloncillos. A sign posted by the government stated that this was Skeleton Canyon, the site of Geronimo's capitulation.

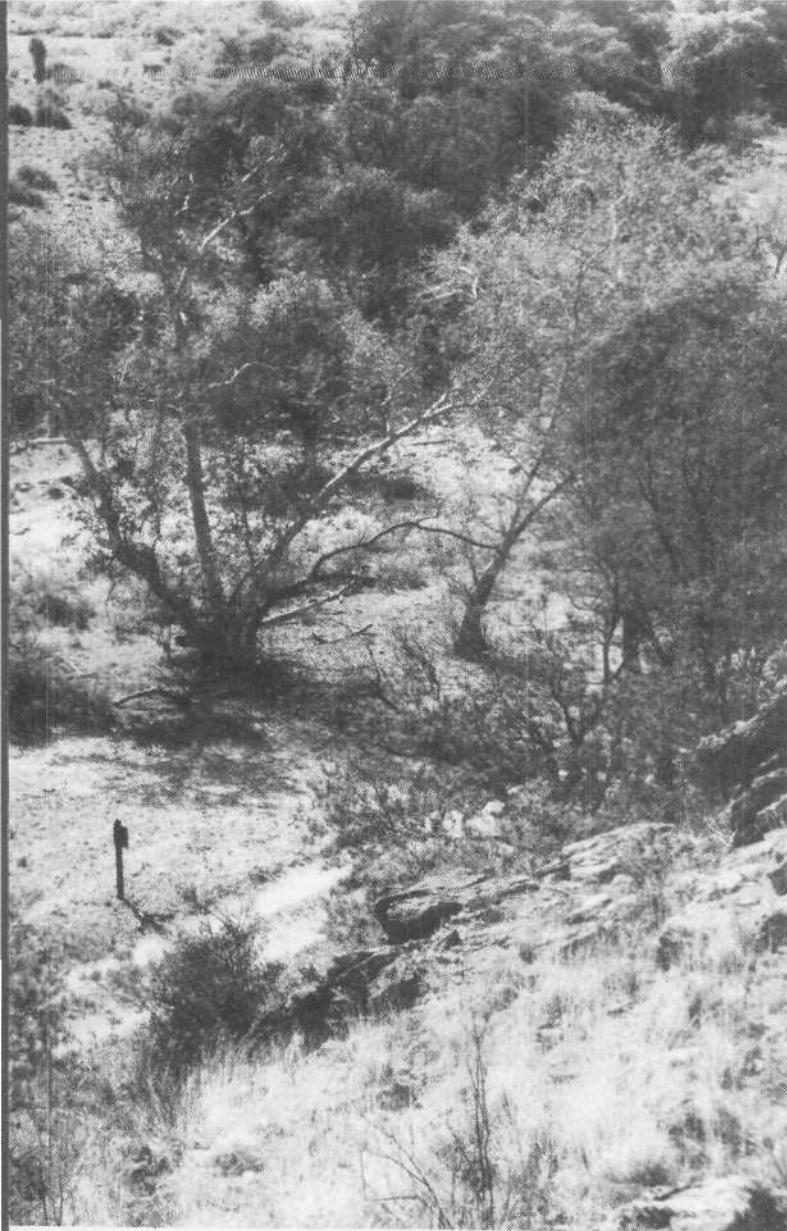
It was very still. The hot sun beat down on the grassy spot. A few twisted sycamores shaded small areas. The north bank was high and rocky, jutting out into the canyon. We climbed a zigzag trail to the top. What a view! Across the dusty miles of the San Bernardino Valley the majestic Chiricahua Mountains stood. We looked down into the canyon below. No wonder the canny Indian had set up his camp on top while the Americans spread out below. Here he was safe from surprise until he was ready to negotiate. I stared down the valley to the distant Mexican border, trying to feel as

this last, rebellious Apache chief must have felt.

Geronimo was the son of a Nedni Apache, a tribe noted for its warlike abilities, which made its living raiding and pillaging. The Nednis lived in the Sierra Madre Mountains of Mexico, which run north and south along the border between the Mexican states of Sonora and Chihuahua, and are an extension of the Guadalupe Mountains. The Guadalupes are south of the Mexican-U.S. Border, themselves an extension of the Peloncillo Mountains just north of Arizona.

Geronimo's father married a woman of the Warm Springs Apache tribe and custom decreed that he become a member of her tribe and assume their ways. They were farmers primarily, so his father also learned to farm, as did Geronimo as he grew. However, his father did not neglect to train him in the proper





Looking south into Skeleton Canyon from the rocky promontory where Geronimo had his camp.

ways of a Nedni Apache, teaching him all his old warrior skills, which were to stand Geronimo in good stead in later years.

"Geronimo" was not his tribal name. He was known by his friends and relatives as "Goyalka" or "One Who Yawns!" He was given the name "Geronimo" by his Mexican enemies during a particularly fierce battle. It is Spanish for "Jerome." When Geronimo's father died, his mother took him to visit his Nedni relatives to continue learning the art of a warrior. He was taught how to find water by looking for patches of green, and to avoid drinking there before nightfall, to keep his presence hidden from any others who might venture to water during the daylight hours. He was told large, shady areas in the heat of summer could be a trap. It was safer to utilize small bits of shade that others might overlook.

Geronimo, [mounted] with his son and grandson, taken in 1886, supposedly at the time of his first surrender from which he and 20 of his braves [with their families] fled during a drunken celebration. Photo courtesy of Arizona Historical Society.

Apaches made hiding an art and could conceal themselves on open desert where a rabbit would be hard put for a hiding place. They admired bravery, but not heroics, acting as a predatory animal does, slipping from hiding place to hiding place, rather than charging in boldly to the assault. They felt our American way of fighting was foolhardy. While they fought courageously when cornered, it was not the way they preferred to fight.

Geronimo married a woman from the Chiricahua Apache tribe, and so Cochise became his chief. Since he also married within his own tribe, the Warm Springs Apache Chief, Mangas Coloradas, was sometimes named as his chief, also. Both tribes were closely related, and Cochise was much admired by Geronimo. No doubt influenced by Cochise's attitude, Geronimo surrendered to the pressures of U.S. forces several times. Each time, since they were late arrivals, his small band was settled in vacant areas on the San Carlos Indian Reservation which proved unsuitable for farming. There was little to do other than try to scratch a living from the barren soil and accept the handouts of the Government.





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After putting up with this sterile existence for a time, Geronimo would gather up his followers and their families and flee the Reservation. He wanted to live the life he had formerly lived as a "wild" Apache, growing the crops his people needed and hunting game without interference. This, with sporadic raids against other tribes or occasionally against the Mexicans or even the Americans, for manufactured goods, would make them independent.

He might have made it work, even raiding into the United States from his stronghold in the Sierra Madres, if he had been less greedy. As it was, his raids in Mexico and the United States finally forced both countries to relax their border laws to permit members of either military who were "in hot pursuit" of Geronimo and his band to continue on into the neighboring country. This nearly led to Geronimo's capture, as he had become accustomed to having the army halt at the border while he got away with his loot.

One time, when the Americans were "in hot pursuit" of Geronimo and his warriors, hoping to persuade him to surrender, they crossed the border and followed him into the Sierra Madres. A troop of Mexican soldiers, also following the trail of the Apaches, came into the same valley, saw the Apache scouts of the American Army, and opened fire. A dozen soldiers were killed before the Americans could stop the fighting long enough to explain the situation. While this was taking place, Geronimo and his men, who had stopped to watch the fun, were able to outdistance them all.

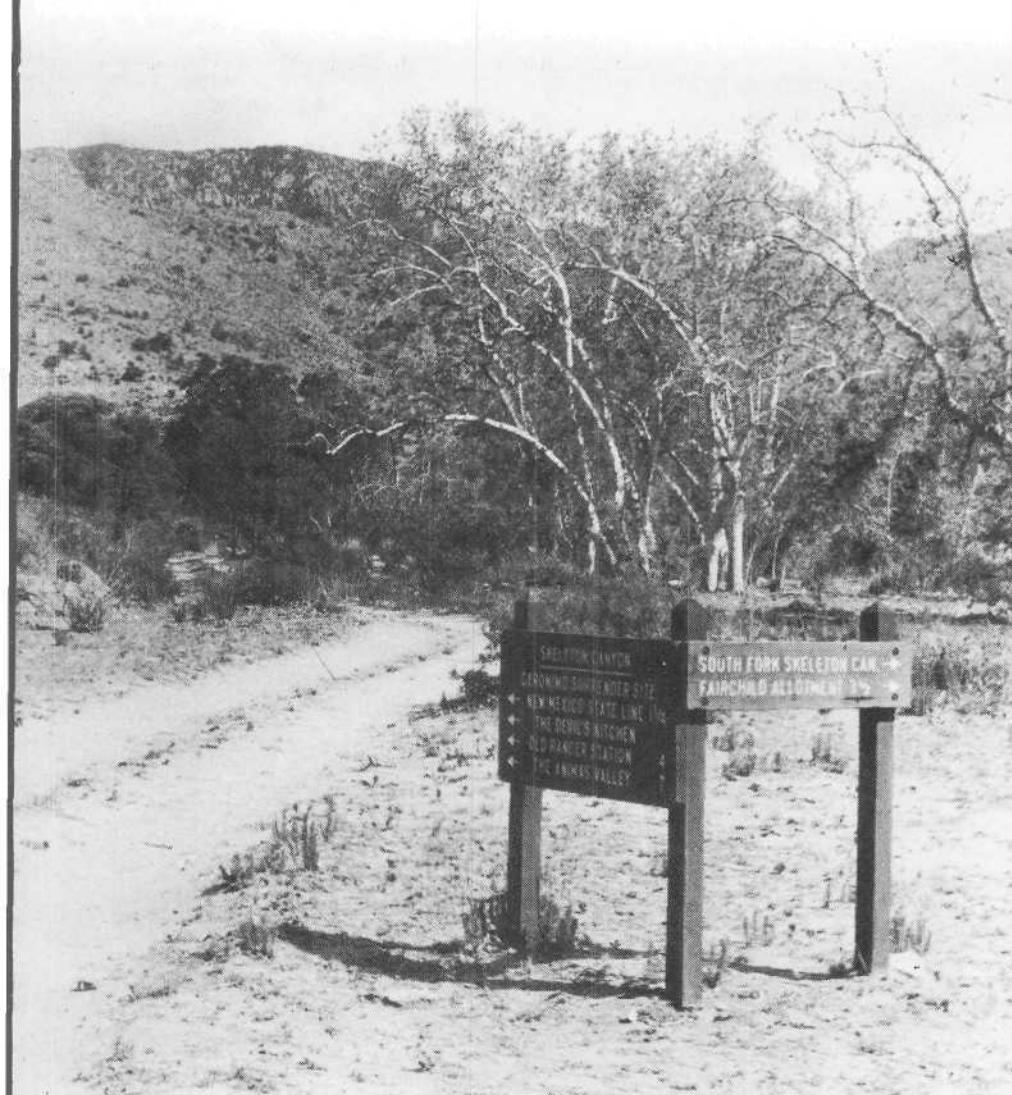
After several more returns to the Reservation, only to flee again, Geronimo finally agreed in March of 1886 to surrender and accept exile in the East for two years, after which he would be returned to the Reservation. Unfortunately, in celebrating the occasion, liquor was made available to the Apaches. Geronimo and his men got roaring drunk and 20 of them, with their families, followed Geronimo back to the Sierra Madre Mountains.

The campaign to capture and subdue these last "wild" Apaches was stepped up monumentally. To nullify the Indian smoke signals, which enabled them to communicate over many miles, the United States Army set up 27 heliograph stations, thus bending the forbidding

mountain peaks and searing sun to their aid. Over 2,000 messages were sent regarding the Indian movements between May 1 and September 30, 1886. One message was sent over 800 miles in less than four hours. Heliograph Peak in the Graham Mountains was once such a station.

An expeditionary force under Captain W. H. Lawton followed Geronimo for three months, aided by these heliographed descriptions of Geronimo's movements. With him was a friend of Geronimo, Lt. Charles B. Gatewood. Gatewood was seriously ill and ready for retirement but, knowing his friend's distrust of the white man, he had agreed to accompany the troops and try to persuade Geronimo to surrender once more. When he was finally able to talk with Geronimo under a flag of truce, he pointed out to the old warrior that all the Warm Spring and Chiricahua Apaches who had been living on the Arizona Reservation had been sent to Florida and were living in a land of many trees and much water. All that were left was his small band. If he would surrender to the Great White Chief, as represented by General Miles, he and his warriors would be sent, along with their families, to Florida to join their tribe.

Many members of his group were rebellious and wanted to surrender and return to a less hazardous and more comfortable way of life. Even Geronimo was tired of the continual running. He had wanted to live as he had lived as a young man. But the two armies never gave them any peace. It was impossible to live this way, trying to keep homes and raise children. He agreed to talk to the man being sent by the Great White Chief in Washington. But, it must be in a place of his own choosing. And he chose to come across the border into the United States, into the Peloncillo Mountains to a high point of rocky land jutting above the confluence of the two branches of Skeleton Canyon. Here he could see for miles across the San Bernardino Valley to the Chiricahua Mountains. No one could surprise him. And the white men could camp below. They would meet in the white men's camp. And thus it came about. After much talk, Geronimo's old friend persuaded him that he had no recourse, his only hope for peace lay in unconditional surrender to the will of the American Army.



The road continues, but fords across the stream are impassable for a passenger car.

It came hard for Geronimo, but his men were weary of fighting and running. At last he agreed to surrender, but with the understanding that he and his small group would join the rest of his tribe in Florida, where they would grow crops, raise cattle and be happy. In five years, he and his tribe would be returned to their beloved Gila River drainage, on a small area reserved for them alone. This is what his friend, Lt. Gatewood, accepted as the terms of his surrender.

When General Miles finally arrived at Skeleton Canyon, he accepted Geronimo's surrender and arranged for them all to be transported to Florida. Unfortunately, none of the terms agreed upon by Lt. Gatewood and Geronimo were considered binding on the Army. The Apache leader and his scraggly warriors were bundled off to Fort Pickens in Florida. His women and children were sent to St. Augustine, another Florida fort, and the men who were members of the Chiricahua Apache group went to Fort Marion. The hot, humid climate of Flori-

da did not agree with the desert Indians, and many died. Public opinion changed when their sad plight became known. After much political maneuvering, the whole group of Apaches in Florida were reunited at Mt. Vernon Barracks, Alabama, in 1887, where they remained for five full years. But the desire of the Arizona Apaches to return home was never to be realized. Though dwindling in number, aging and ill, the Apache tribe of Geronimo was still feared by the white man. To prevent any chance of another uprising, the Warm Springs and Chiricahua Apache tribes were sent to Fort Sill, Oklahoma in 1894. They were never permitted to return home to Arizona, but ended their days surrounded by Plains Indians, alien to their ways, in a rolling, grassy land that had none of the rugged mountains, soft valleys and open desert of their homeland.

Geronimo died on February 17, 1909. I looked out across the rugged deserts and mountains he'd loved. Perhaps he had gone home at last. □

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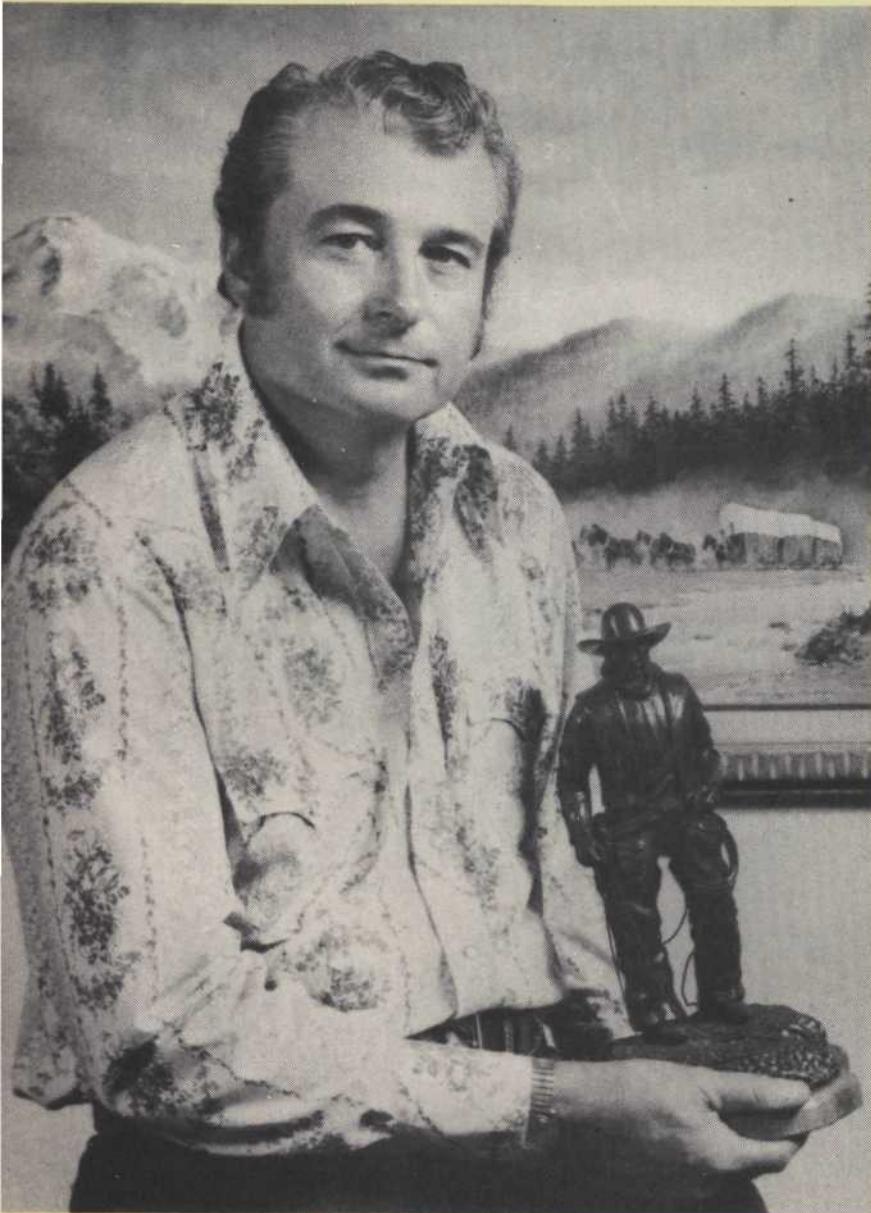
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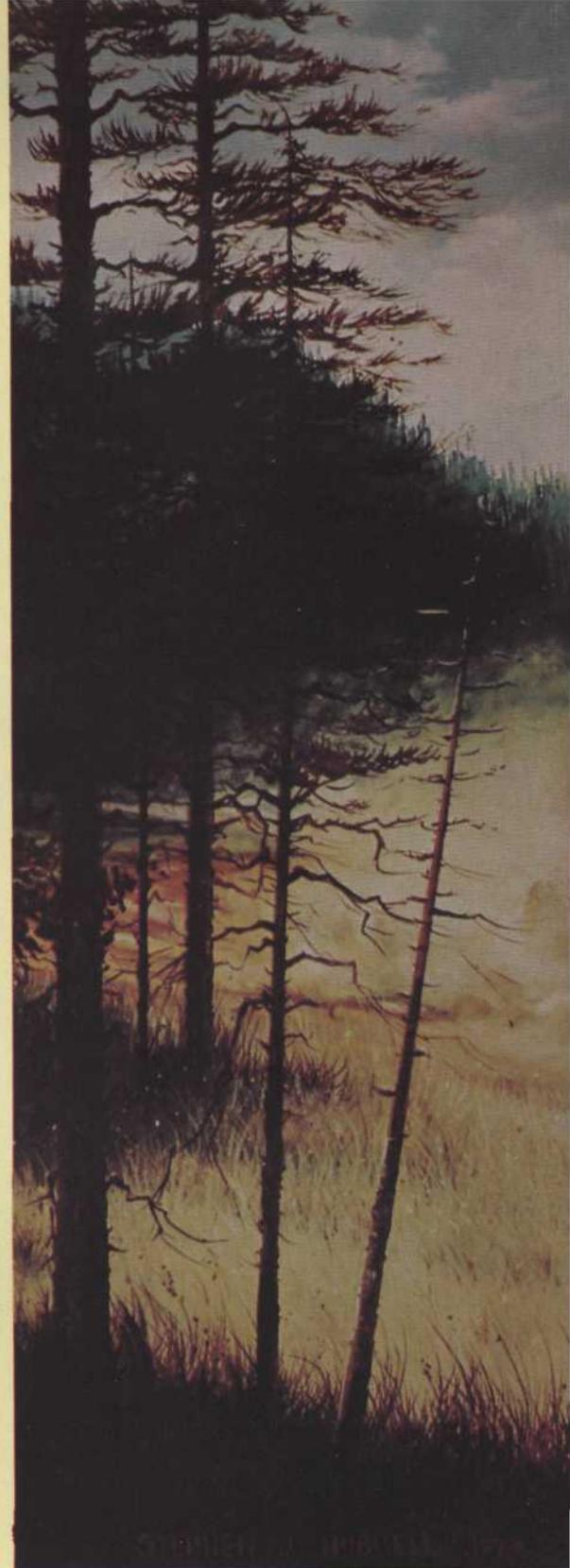
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30" x 40", oil.
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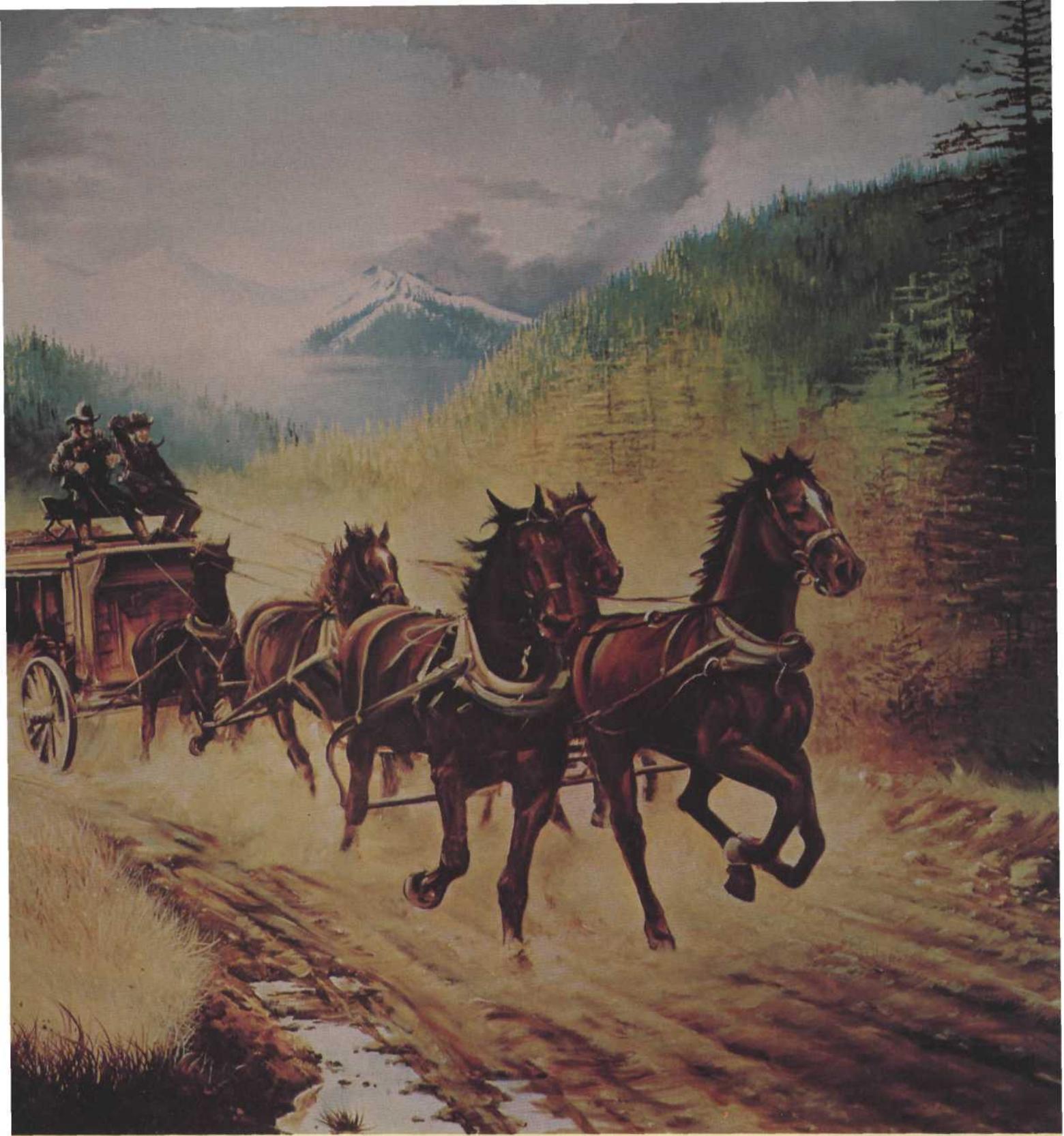
S. HUBBELL



Stephen J. Hubbell, AICA



HEAD BLUE skies and cloud formations of unparalleled artistic beauty are just two of the features you will see in Steve Hubbell's paintings. These lend a scenic backdrop to the major portion of his works which may feature horses, an old barn, some Indian teepees along the river, or a



miner finding his way out of the mountains after an expedition.

All this subject matter can be found in beautiful Trinity County, California. The area is full of history starting with the Gold Rush Days and many things are still in evidence. For an artist interested in depicting the American West,

Hubbell has extensive references at his fingertips. A finished piece of art by Steve Hubbell, whether it is an oil painting, pencil drawing or a sculpture, is the end result of hours of careful research, numerous sketches and the combination of exacting detail and a labor of love.

He was born and raised in Pasadena, California of a pioneer family. As a small boy, his grandmother, also a painter, presented him with his first set of oils. Steve did his first oil painting at age eight. Throughout his elementary and high school years, he excelled in art classes and was encouraged by his



*"Cowboy,"
Bronze
Edition
of 20.*

family. After high school, and like most youngsters starting out on their own, a job was necessary so he attended Frank Wiggins Trade School in Los Angeles and learned to be a technical illustrator. After a couple of years in this field, Hubbell felt he must expand his potential as an artist so he opened his own commercial art service. Although this was a successful venture and he was able to expand his talents by using different mediums and techniques, it was still "commercial" and unfulfilling.

Hubbell spent some years as Art Director of an electronics firm and also an ad agency, but always there was the feeling of searching for something more. His spare time was taken up by painting and drawing, usually scenes with horses.

Steve's first love is pencil drawing. He has done some very intricate and detailed drawings. He believes that an artist should first learn to draw before trying to paint in water color, oils or any other media. This he tells to those aspiring young artists that come to him for advice. He was the sole illustrator and co-publisher of the book, "The Appaloosa Breed Characteristics."

Hubbell realized his direction was



*18" x 24"
oil.
Private
collection.*



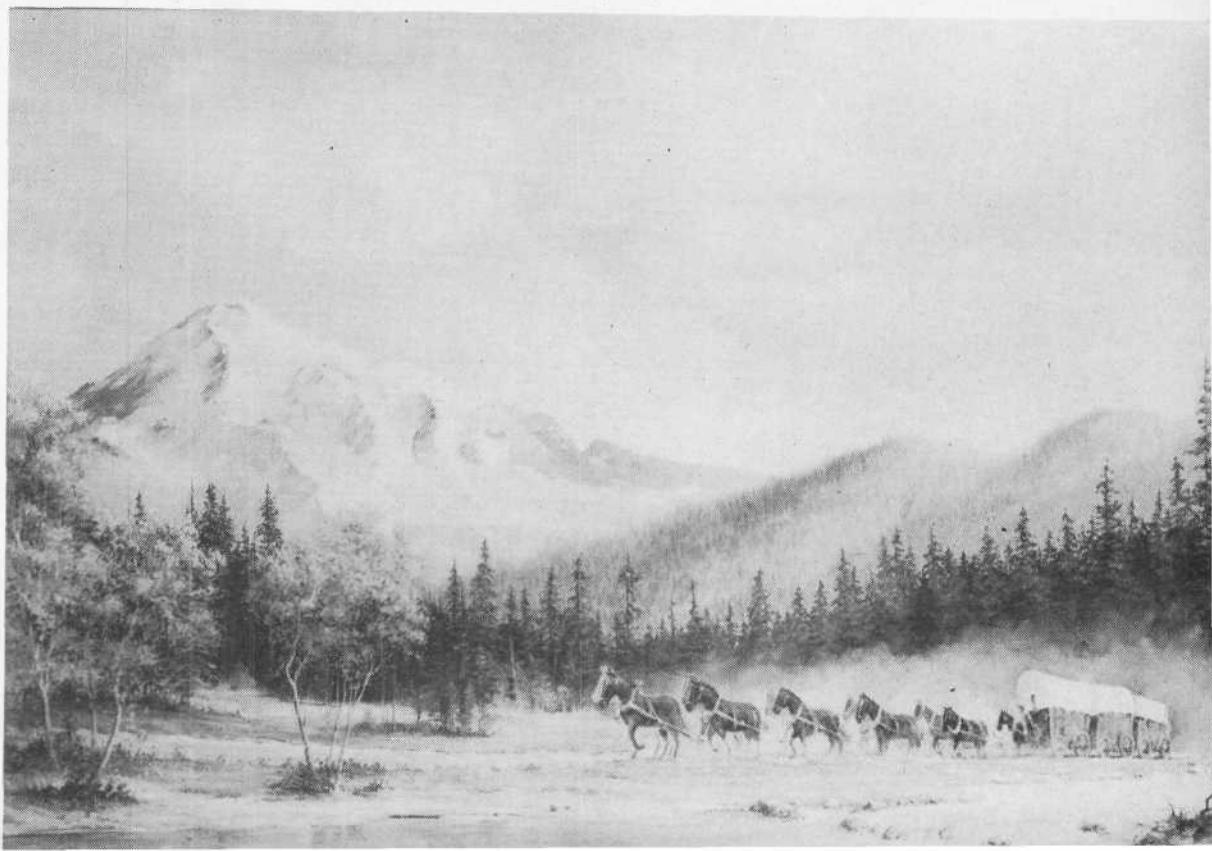
Western Art and in 1971 the family moved to Weaverville, where he now spends full time as a fine artist, painting and sculpturing. He has recently been voted into the AICA (American Indian & Cowboy Artists Society).

Hubbell has exhibited in many galleries around the West such as the Saddleback Inn, Santa Ana, California,

Hobarts Gallery in Ferndale, California and House of Bronze in Prescott, Arizona to mention a few. His work is always on exhibit at the Snyder-Highlands Art Gallery in Weaverville where he is resident artist, and some of his fine paintings can presently be seen at the Desert Magazine Art Gallery in Palm Desert,

California. He has also exhibited in many group shows and has had numerous one-man shows.

As a completely self-taught artist, Hubbell feels he has come a long way and each experience along that road has helped him reach his artistic goals. He also feels that every new day offers him a chance to broaden his scope. □

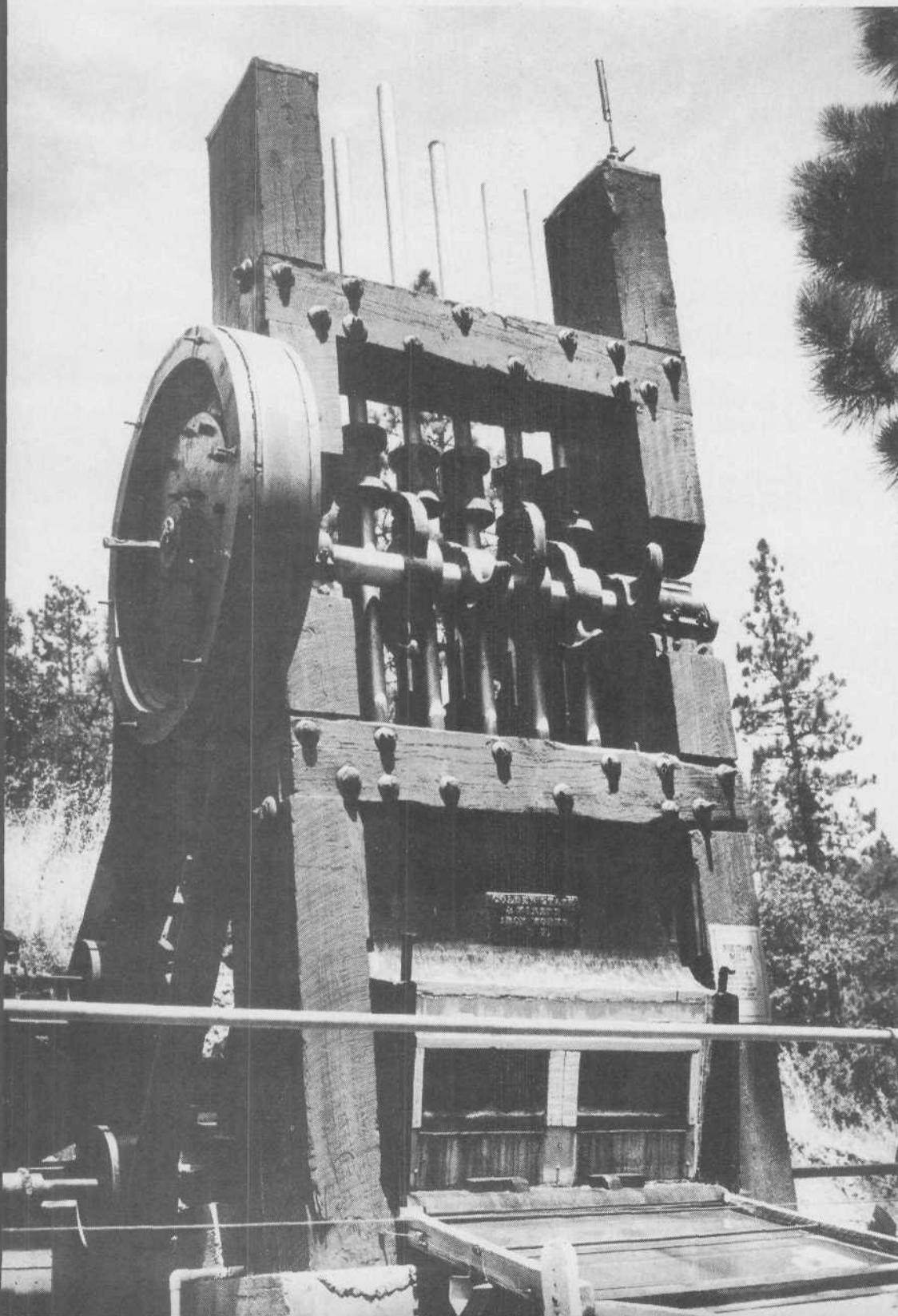


"Jerk Line,"
28"x40"
oil.

Desert GHOSTS

by HOWARD NEAL

Julian, California



THE BROTHERS, Mike and Webb Julian, arrived in the mountains east of San Diego in November of 1869. With them, to look for gold in the newly formed Coleman Mining District, were their two cousins, Drury and Jim Bailey.

Just a few weeks before, Fred Coleman had first spotted the glitter of gold in a small mountain creek. Memories of California's Mother Lode still burned brightly in the minds of many. So, by the time the Julians and the Baileys arrived, there were already nearly 150 miners on the scene.

The Coleman discovery was, unfortunately, not another Mother Lode. The placer gold was thin. If a man could pan two or three dollars worth of gold in a day he was very lucky.

Prospects did not look bright for the new arrivals. That is, they did not look bright until Mike Julian and Drury Bailey discovered a

The original stamp mill, brought to the mine in 1872, is on display at the Eagle Mine. Mine tours are conducted at the Eagle and High Peak gold mines and visitors are also welcome at the Washington Mine as well as the site of the Stonewall Mine in Cuyamaca Rancho State Park. Photographs by Howard Neal.



The Witch Creek School was originally built in 1888. It was recently moved to its present location next to the Memorial Museum and restored to serve as a public library as well as a mining days one-room school house.

of the Spanish land grant known as Rancho Cuyamaca claimed that their grant embraced the land of Julian. The miners of Julian and, in time, the U. S. Surveyor General disagreed. For four years the battle raged before the Cuyamaca claim was rejected and Julian boomed again.

By the end of 1876 the gold of Julian seemed to be all but gone. The mines were closing, and the population declined to little more than 100. The gold was not really gone, though, and in 1888 two more rich discoveries

rich pocket of gold-laced quartz in February of 1870. Although the gold deposit that they discovered turned out to be shallow, it proved that hard-rock gold could be found in the area. Others joined the search and, within a week, three other strikes had been made.

Now was the time for a real gold rush. From San Diego, from Los Angeles, and from as far away as San Francisco, the miners and prospectors came. By the end of March, more than 20 claims had been filed.

Even before his discovery, Drury Bailey had decided to stay and make his home in the picturesque mountain valley. He had staked land for both a house and a ranch. With the influx of gold seekers, it was Drury Bailey's land which became the townsite. He laid out city lots and, in honor of his

cousin, Mike, he named his town Julian.

It took only a few months for the tents of Julian to give way to wooden structures. Stores were built, three stamp mills were brought in and put into operation, and the fledgling community had no less than a dozen saloons. The town's population quickly reached 300.

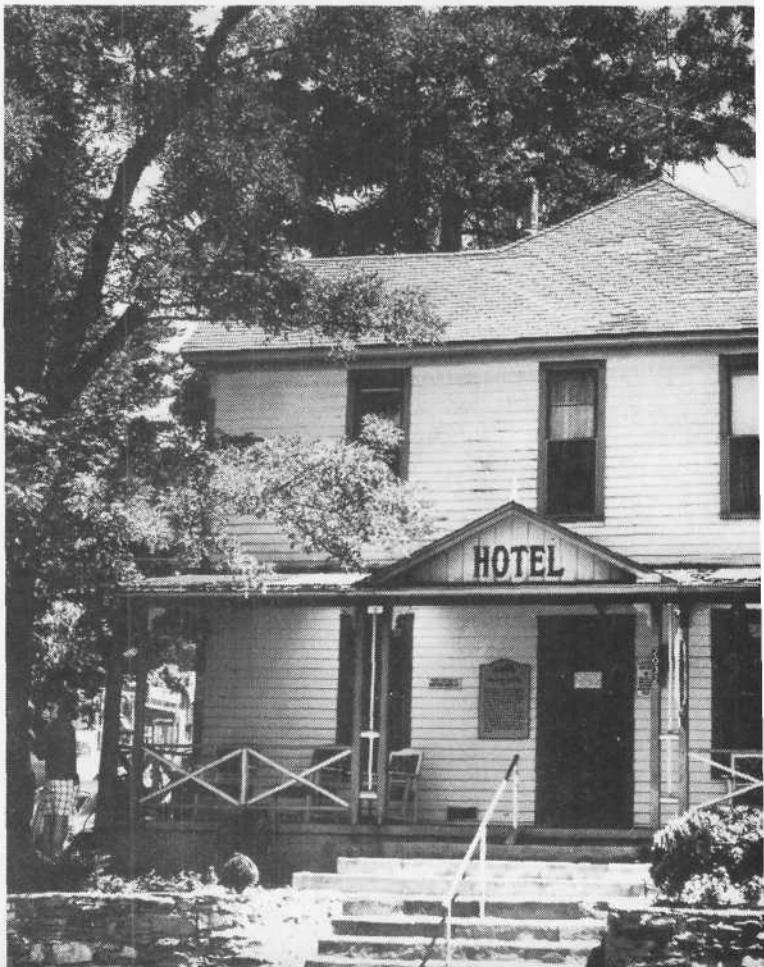
Then came the great land battle. It was a battle in the courts that put Julian in the national spotlight and brought mining activity to a screeching halt. The owners

The Julian Hotel, built in 1887. A sign on the building proclaims that it is the "Southland's oldest hotel in continuous operation." Many buildings along the main street of Julian date from mining days nearly 100 years ago.

were made. Julian grew and prospered again. Old mines were reopened. New mines were established. By 1895 the population was up to over 1,000 and Julian boasted hotels, churches, schools and many more than the dozen saloons of two decades before.

As time passed, mining activity again waned and finally stopped, but the community of Julian survived. Today there are many who would have agreed with Drury Bailey. The beautiful mountain valley that looks so much as if it could be a part of the Mother Lode country of the Sierra foothills, is a fine place to have a home.

Julian is northeast of San Diego, approximately 40 miles east of Escondido on California State Highway 78. It is also approximately 50 miles west of Highway 86 and the Salton Sea. □



Utah Seagulls and The Nevada Dry Land Shrimp

by JOHN SOUTHWORTH



IT IS illegal to kill a seagull in Utah. A strange law for a landlocked state? Not at all. In fact, the meaningful law was probably on the books long before the seagull was protected in seaboard states. All this for a very good reason which the farmers of Utah have never forgotten. Even after their land began to bear "goody" crops such as luscious large red (or black) cherries which the seagulls just love, depredations by the big white sea birds still don't arouse too many complaints. Change crops but don't bother those birds!

Such an avian utopia might now be suffering just a bit as government intervention and the big brother attitude takes over. But before the time of airplanes and easily spread effective bug killers, seagulls were Utah's "Bug Brigade."

It all started a long time ago, in 1837 to be exact, when the first small group of Mormon pioneers reached the Great Salt Lake Valley, exiles from their established homes in Illinois. This early advance group, all 148 of them including women and children, were charged with the serious responsibility of preparing the way for more pilgrims of the Church of Latter Day Saints who would later be coming in ever-increasing numbers.

Working with Mormon diligence, the advance group set up housekeeping and planted a communal 500 acres of wheat and other green crops.

As with the Massachusetts Pilgrims of 200 years before, their first winter was rough and the carefully tended fields were badly struck by frost. But spring came, new green started, and with every passing day the settlers foresaw even greater success in their critical frontier mission for the Mormon Church.

All the newly cultivated land loaded with tender green plants attracted unwanted guests in a form of a pest the emigrant Mormons had never encountered before, something not native east of the Rocky Mountains. Like a marching invasion of giant ants two inches long, advancing steadily but clumsily on long legs, antennae waving and mandibles working in eager anticipation of the coming feast, hordes in unaccountable millions of what are now called "Mormon

The Seagull Monument on Temple Square, Salt Lake City. Illustration by Merle Graffam.

Crickets" descended upon the precious grain fields, devouring everything edible down to the ground. Those behind, unfed and ravenous, chewed on the legs and fallen bodies of those who had gone before. It was a typical Mormon Cricket incursion, vast, frightening and unstoppable.

To the hard-beset Mormon band, it looked like the sudden end of their brave new world. Their best efforts with fire and flame only slowed the voracious creatures temporarily as acre after acre of fine crops fell to their destruction.

Shoveling the squirming insects by the ton into irrigation ditches only plugged the ditches and provided dry passage for following ranks of the marching, inexorable plague of crickets.

Beaten and broken in spirit, the Mormons stood aghast as now an apparent second plague descended to torment them. This time it was giant white birds. Some of those birds had been seen before from a distance but now in great screaming flights of thousands they arrived to attack the already doomed fields. Surely they would finish whatever little the crickets left. Utter despair tore at the hearts of the frontier families.

But the green crops didn't disappear, the crickets did. Recently abandoned hope returned to the hearts of the pioneer spectators as they watched a miracle unfold before their very eyes. It was now obvious that, rather than eating the grain, the gulls were devouring the insects in great numbers, regurgitating the revolting meal when they could hold no more, and returning refreshed to the feast.

It was a big job but the seagulls were capable adversaries. The depredations slowed and then stopped. When the seagulls were finished, the fields were free of live crickets. It was an entomological Armageddon. There were no living insects of any size or shape left to be seen. All was quiet where disaster had recently visited and the victorious seagulls returned to their island home, now called Bird Island, in the Great Salt Lake. The Mormon crops, and the very future of the Mormon Church in Utah, were secure.

In 1913 the Church of Jesus Christ of Latter Day Saints erected a suitable monument to their feathered deliverers. A marble column commemorating the historical event stands proudly and

prominently in Salt Lake City's Temple Square. It is the only monument in the world dedicated to the common seagull.

Through the miracle of selective poison bait and airborn sprays wielded by Government pest control services, the Mormon Cricket is no longer a threat. Though no longer of such great importance to the vast agricultural acreage of modern Utah, the seagulls of Bird Island are still protected by State law.

The story is quite different in Nevada, however, where there are no seagulls and where much of the land remains substantially as it was before settlement by the white man. In vast primitive areas the crickets still reproduce and migrate as they always did. Unless they threaten human works, they are not controlled too severely and their annual springtime emergence still makes the papers once in a while.

Mormon Crickets appear in greatest number in North Central Nevada, the home range of that feisty little weekly, the *Reese River Reveille*, the oldest continuously active newspaper in the State. It is always a delight to see that little paper consulted and quoted by national and international news services when the crickets begin to move. "Austin, Nevada? New York calling." Wonderful!

The cricket migrations make interesting copy and may be followed for days and weeks by large city newspapers. Since the crickets no longer threaten any crops, the stories are usually limited to blow-by-blow descriptions of their advance and retreat as they near centers of habitation. Their hordes can still slow transcontinental traffic using Northern Nevada highways by providing enough crushed bodies to make pavement slippery and unsafe for travel. Similarly, their crushed bodies cause railroad trains to lose traction, especially on significant grades, despite the heaviest sanding of the rails. And the story of a devoured full grown rattlesnake livens up any city desk on an otherwise dull afternoon.

The Mormon Cricket is not a real cricket. It looks more like a large stumpy grasshopper about two inches in length and three-quarters of an inch in each of the other two dimensions. It has long powerful hind legs much like those of the common grasshopper, but is too heavy to jump much. Instead, it crawls slowly and clumsily, eating everything in sight, no

matter what, even its own companions. It is brown to black and not at all pretty. It cannot fly since it has no wings under its wing covers, but by never resting, it might cover miles per day. Mostly it is just an ugly appetite on the move. It can cause terrible damage to wheat and alfalfa crops and to range grasses. Writers have called it, among other bad things, "The frightful bug," the black Philistine," and "a cross between the spider and the buffalo." Their migrations, when in good form, can clear the countryside of every living thing.

The Mormon Cricket is really a katydid, related to the grasshopper and Biblical locust. It is known to science as *Anabrus Simplex*. Because it cannot fly, metal and wood barriers in its path serve as effective control devices for small numbers of the pests. Large numbers will fill irrigation ditches and pack high against buildings and fences.

During the days of the Civilian Conservation Corps in Nevada, the annual cricket invasions were hailed with much enthusiasm. It was great sport, and not very tiring, to get out with sticks and pans, make a great noise, and "herd" the slow moving beasties into prepared pits and ditches where they would be soaked with fuel oil and destroyed in great flaming pyres.

It was during CCC times that an incredulous Eastern visitor stopped for a summer drink at the typical Western store and gas station, which comprised all of Primeaux, Nevada, on old transcontinental Highway 40 just north of still visible Beowawe. That visitor became a chance witness to one of the CCC cricket drives moving right through "town." Overcome by curiosity, she asked Old Man Primeaux just what in the world was going on.

Now the Old Man had regularly sat in that big chair of his outside the way station he had started from scratch many years before, had seen every kind of tenderfoot go through, and was always fully prepared to answer the silliest greenhorn question. But this one was easy.

"Well, ma'am," he replied, in his always gracious and pleasant manner, and with an airy wave of his arm, "that is my summer crop of Nevada Dry Land Shrimp. You are a very lucky lady to arrive at just the right time to watch my boys bring them in off the range on their way to the cannery over yonder." □

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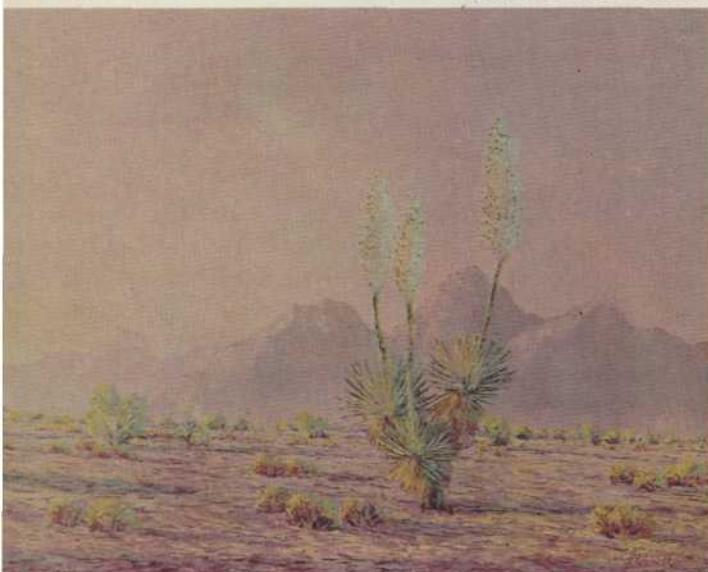
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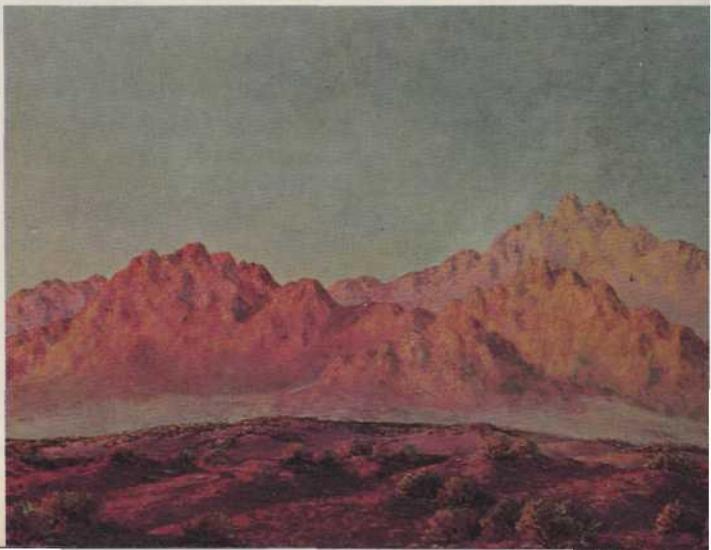


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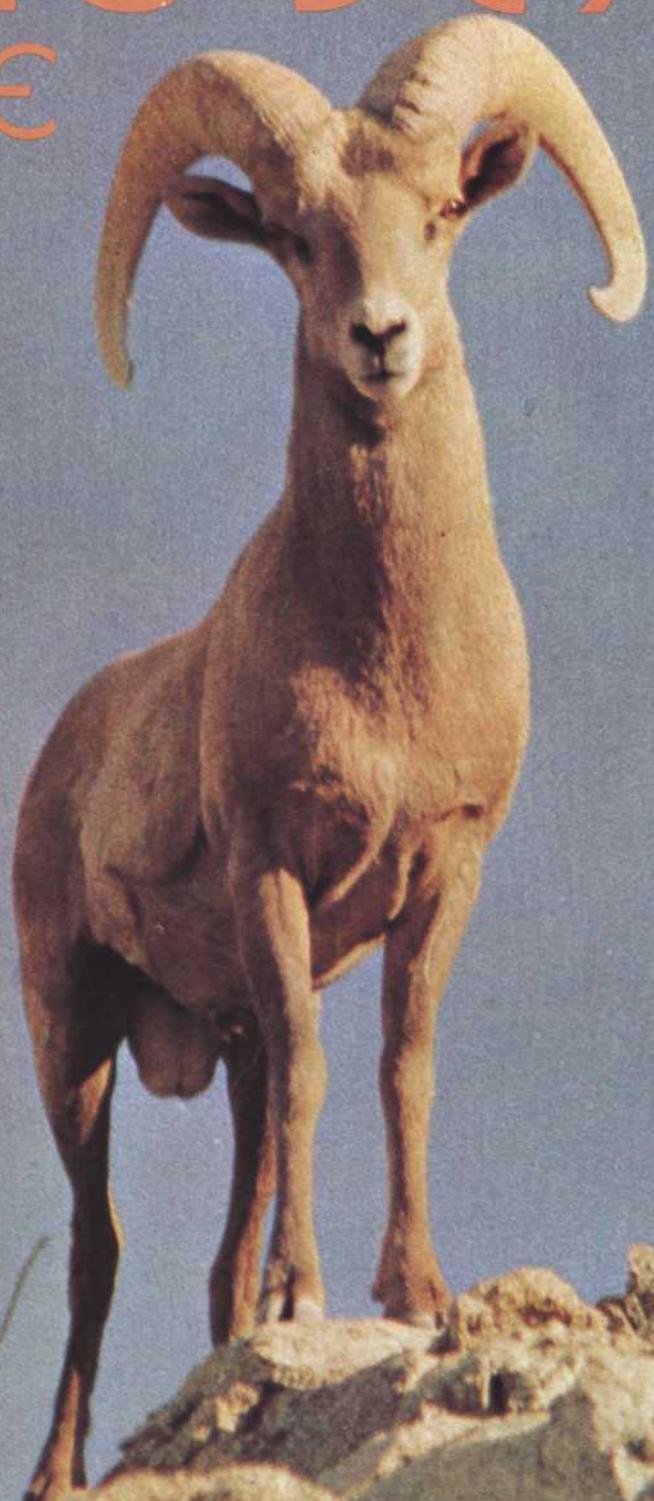


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THE LIVING DESERT RESERVE



WHAT IS A DESERT?

Depending on whose definition you accept, desert covers from one-seventh to approximately 20 percent of the earth's land surface. More than 12,000,000 acres of inland Southern California fall into this category.

Desert perhaps can be defined as a state of mind. Some people consider everything east of Los Angeles or west of Chicago as desert—bare, ugly, possessed of terrible weather and forbidding landscapes on each side of the interstate freeway.

Other people live in it because they love it, or visit it at every opportunity. They find the sparse vegetation colorful and unique; to them, the grotesque land formations, technicolor sandstones and the extremes of temperatures are just what they wanted.

The true desert denizens whether plant or animal, including man, stick it out. They have learned to cope. "Adaptation" the scientist calls this process. Adaptation to extremes of temperature, lack of water, too much sunshine, or not enough. Plants do this by having the ability to lie dormant or to use little moisture during the hottest or driest times. Animals have learned to burrow or to migrate to escape the heat.

Man, or at least that considerable portion of his burgeoning population dedicated to desert living,

has begun to adapt, primarily by learning from the plants and animals he lives with. Man probably developed air-conditioning because he couldn't burrow into the ground where even a few inches will drop the temperature 12 - 15 degrees on the hottest day. Man hasn't quite learned how to get along with little or no outside water as have many of the desert denizens but at least he has learned to avoid strenuous labor during the times of peak water requirement.

And man has something else going for him, an ability that only the birds have as well. He can escape, for the day or the season, to a more equitable climate.

If we agree that desert is here to stay, and we like it, then perhaps we should learn a little more about it. This booklet will permit you to learn about desert, its lifeforms at least, the easy way, in your favorite chair. After you read it, you may wish to experience desert firsthand, if you haven't already, and that's where the Living Desert Reserve comes in. Through its trails, exhibits, indoors and out, you may experience the endless variety of desert life and surroundings. Or, you may regard the Living Desert Reserve as a door way to the REAL DESERT, the huge, harshly beautiful, sometimes benevolent land out there beyond the fence.

DESERT BY DEFINITION

If you can't quite put into words what you think "desert" is, don't worry. Most of the experts can't agree either. However, we should start this section with an agreeable definition, so we'll follow the example of most successful desert writers and borrow bits and pieces from several sources.

First off, most agree, desert is typified by a lack of rainfall, say under 10 inches annually. What there is falls in an erratic, uneven manner. Some of the desert lands along the lower Colorado River have been known to avoid the U.S. rainfall records for as long as three years.

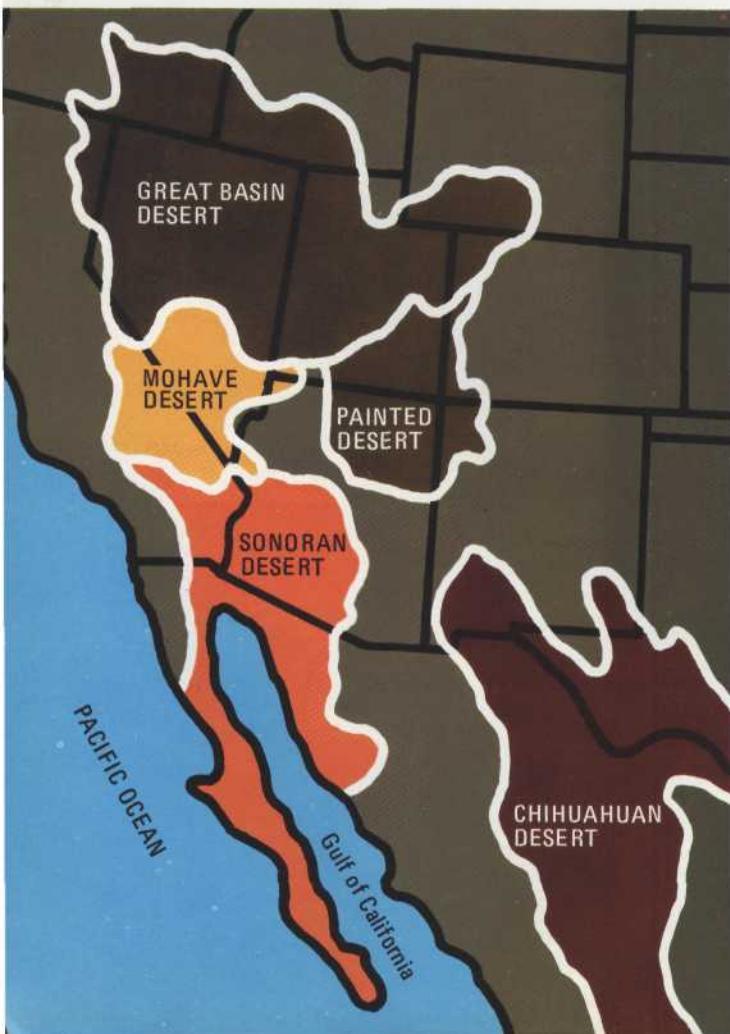
And, most definitions agree that desert is characterized by persistent, frequently high winds.

Thirdly is the matter of temperatures. They tend to be high during daytimes much of the years. The combination of wind, high temperature and ample sunlight lead to a major attribute, a high evaporation rate.

A definition of "desert" might read:

A desert is a region of scant unevenly distributed rainfall, with persistent winds and high daytime temperatures that combine to create a high evaporative rate.

The deserts of North America are found in a narrow latitudinal belt, from 15 to 40 degrees north of the equator, generally inland behind high coastal mountain barriers (the exception being northwestern Mexico), and west of the continental divide. The reasons for this are complex meteorological conditions but it suffices to say that the drying, hot winds generally blow INTO the desert and that mountains act as a buffer to keep moist air out, hence the high evaporative factor.



In the United States all deserts are found in the southwest and several are continuations of deserts that start in Mexico. There are five North American deserts—the Chihuahuan, Sonoran, Painted, Mohave and the Great Basin. Only the Sonoran need concern us directly because the Coachella Valley is part of one of its six subdivisions, the Colorado named for the Colorado River which forms its eastern boundary. The others include the Arizona Upland, the Yuman, Vizcaino, Gulf Coast and the Sonoran Proper.

Coachella Valley is part of the lowest lying North American desert, the Colorado, which consists of all the California lands draining into the Colorado River from a vaguely defined point between Needles and Las Vegas. Not properly a valley, the Coachella and neighboring Imperial Valley are depressed troughs created by the action of the San Andreas fault system

The Coachella Valley is not the lowest portion of North America. That honor goes to a small section of Death Valley (in the Mohave Desert) near Badwater, but this area does have the greatest mass below sea level and the bottom of the Salton Sea, at minus 270 feet more or less, is within 15 feet of the Death Valley nadir.

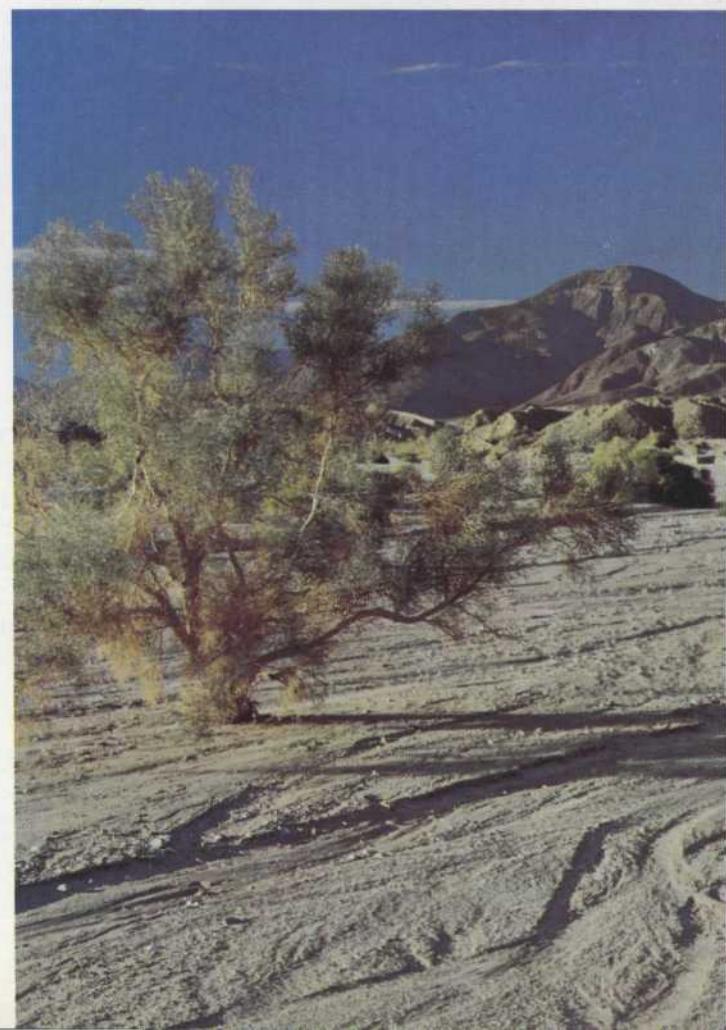
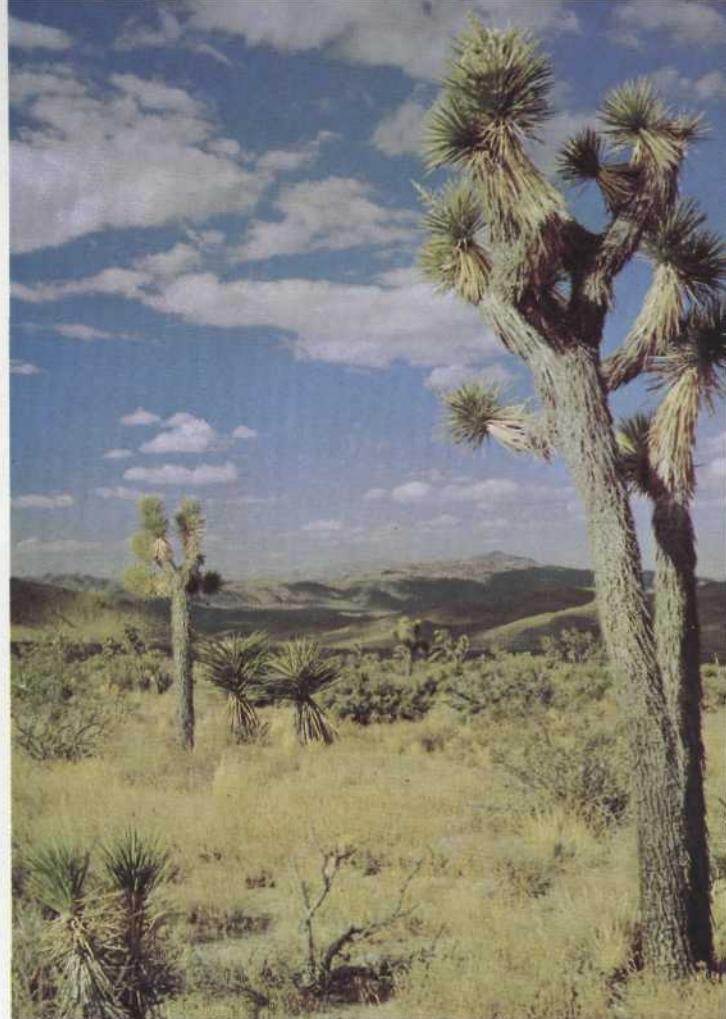
The Colorado Desert is distinguished from its neighbor, the Mohave (the Indians of the same tribe prefer the "h" to the more often used "j" spelling from the Spanish) by higher average temperatures and lower elevation. The two regions, sometimes differentiated as the "low" and the "high" desert share many of the same plants and animal forms.

The generally warmer Colorado has other distinctions that may be of little concern to the casual visitor, and even to most of its longtime residents, but it does include a most varied and colorful plant and animal life—and by animals we mean reptiles, mammals, birds and insects—which you will read more about in later pages.

Because it is dry, and because it is hot, the Colorado Desert frequently gives an impression of lifelessness, particularly at midday in August, but its plant and animal denizens are still there. The former tend to lose their leaves as a water retention device or "mechanism." The latter go overhead in the trees or underground during the hottest parts of the day, except for a few highly visible species, notably the antelope ground squirrel or "desert chipmunk," and the desert iguana lizard.

The Colorado Desert is a highly variable community of plants, people and other animals, with much more than just pretty rocks and sunsets. It is a lovely, if forbidding land that will govern your life, if you let it. And, if you give it more than 30 days or so, it will grow on you.

By reading this descriptive text and studying the diverse color photos that accompany it you may be taking that fatal step toward a consuming love affair that should leave you with only happy memories.



Top: Joshua Trees on the Mohave Desert.

Bottom: Smoke Trees on the Colorado Desert.

DESERT PLANTS

The desert's harsh environment poses difficult problems for its plant life. They cannot migrate or escape the extreme temperatures, drying wind, abrading sand, low humidity or poor soil. Their basic problem is the limited availability of moisture. Plants cope with an environment providing less than three inches of rainfall annually in three ways. Some are drought escaping; some, drought avoiding, and the truly desert adapted, are drought tolerating.

Annual plants, which grow from seed each year, escape the long, dry periods and extreme temperatures by growing and flowering in the brief spring, after winter rains and before summer heat. A few annuals also bloom after infrequent fall rains. During the rest of the year their seeds lie dormant. In the Coachella Valley, fields of sand verbena, desert primrose, sunflowers and many other annuals are a common sight in February, March and April.

Drought-avoiders are those which are only able to grow where there is a continuous supply of water. The palo verde, one of the desert's largest trees, and the smoke tree grow only in washbeds where their deep roots reach permanent ground water and where they have the additional benefit of periodic floodwater. The stately Washingtonia native fan palm grows only where water is near the surface in springs or oases.

Drought tolerating plants are truly adapted to desert living, able to get along without water for long periods. Many of these specialized plants have small leaves or none at all. Small leaves help reduce water loss through evaporation. Ocotillo and brittlebush lose their leaves after spring; creosote bush, one of the most common Coachella Valley plants, has small leaves coated with resin to hold in the moisture. Most drought-tolerators have extensive, shallow root systems which take advantage of even a slight amount of moisture.

Cactus is known for its ability to store moisture, yet even the "desert canteen," the common barrel cactus does not store cool, clear water if you cut it open. Rather, the stringy, hard to reach pulp is high in mineral salts and nearly impossible to consume. You will use more precious energy trying to open the cactus than you can get from it. In addition to cacti, several other plant species store moisture, generally in their tubular roots.

The Living Desert Reserve has 15 acres dedicated to the development of a botanical garden, named for its sponsor, the James Irvine Foundation. Within the still-evolving Irvine Gardens you will find plants in all three of these basic drought-coping categories, from all of the North American desert regions and from other deserts throughout the world. The plants are attractively labeled and are growing in natural surroundings and habitat settings.

The James Irvine Gardens also feature a Demonstration Area which has been developed to show how native plants can be used for home landscaping. Another section of the Gardens has been designed to display those native plants which were used by local Indians for food, fiber, medicines and housing material.

Left: Ocotillo; Opposite page, clockwise from upper left, Desert Agave; Desert Lily; Mohave Mound Cactus; Brittlebush, Field of Sand Verbena and Sunflowers; Pin-cushion Cactus; Apricot Mallow.





DESERT BIRDS

As are many desert animal natives, birds often are taken for granted by the visitor. Only when a quail whirrs up at your feet, or a roadrunner darts and sails across the road in front of your car or the lovely, cascading call of a canyon wren echoes do many people notice desert birds.

Many desert animals have evolved special mechanisms to cope with the lack of moisture and temperature extremes, but not most of the birds.

Some, such as Gambel's quail, endure extended dehydration without ill effect; others rely on their flying ability to forage for food and water over relatively long distances. Insect eaters and birds-of-prey, such as hawks and owls, get much of their moisture from their food.

Some birds avoid heat and drought by migrating; the phainopepla and some other species nest here in the spring and then leave. The white-crowned sparrow winters on the desert, just as many humans.

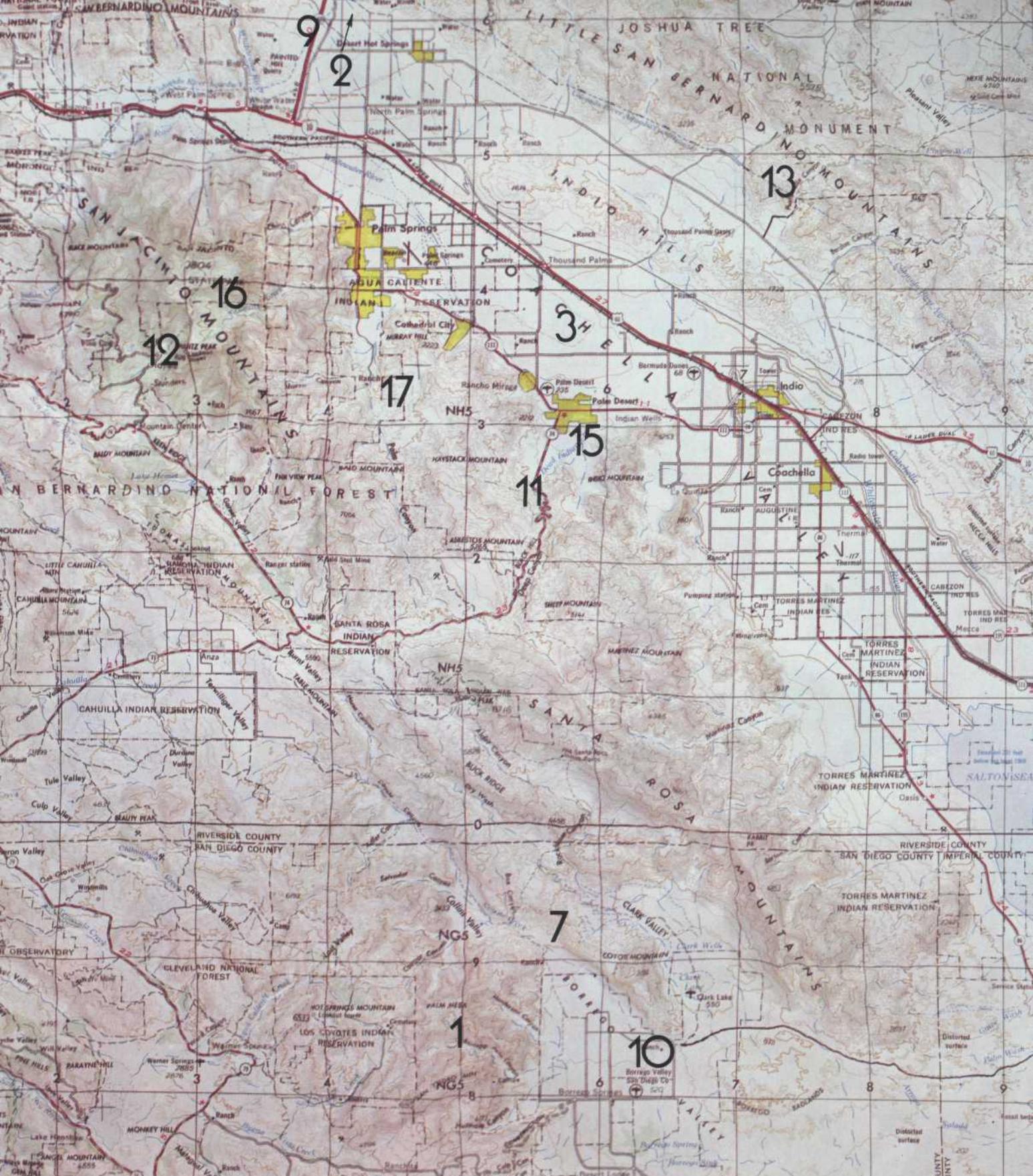
The Coachella Valley is a permanent home to more than 70 bird species. The more common include the Gambel's quail, mourning dove, black-throated sparrow, verdin, cactus wren, roadrunner and burrowing owl.

Living Desert is a haven for these birds. Early morning hikers see many species in the Occasional Lake and Oasis areas. During spring and fall, migrating songbirds and waterfowl visit the oasis.

In addition to wild birds, the Reserve's large, walk-through aviary contains many "home guard" species, quail, dove, warblers, orioles, woodpeckers, hummingbirds and others who behave naturally as you walk through the native palm oasis.

Opposite page: Gambel's Quail; Below, young Costa's Hummingbird; Right, top to bottom, Golden Eagle; Yellow-rumped Warbler; Mourning Dove; Roadrunner.





KEY: F - flowers; B - birding; H - hiking; P - picnicking; C - camping.

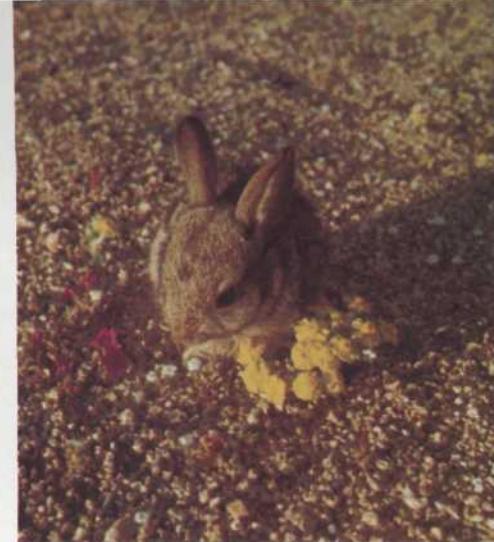
1. ANZA-BORREGO DESERT STATE PARK - F-B-H-P-C. A geologic wonderland filled with spectacular scenery.
2. BIG MORONGO WILDLIFE RESERVE - B-H-P. An oasis which is one of the finest birding areas in the desert.
3. BOB HOPE DRIVE - F. February to April, wildflower fields of sand verbena along the road.
4. BOX CANYON-PAINTED CANYON - H-P-C. Interesting geologic formations created by the action of the San Andreas Fault.

5. COTTONWOOD CANYON - F. March to May, spring wildflower fields along the road.
6. COTTONWOOD SPRINGS - H-B. Good spring birding.
7. COYOTE CANYON - H-B-C-P. Good spring birding along a flowering stream - access by hiking or 4-wheel-drive.
8. DESERT LILY PRESERVE - F. March to May, rare desert lilies and other flowers.
9. DEVIL'S GARDEN - F. March-May, many species of flowering cacti.
10. HENDERSON CANYON ROAD - F. February-April, spring wildflower fields of sand verbena, primrose and many others.

NATURE MAP OF THE COACHELLA VALLEY & SURROUNDING AREA



11. HIGHWAY 74 FROM PALM DESERT TO IDYLLWILD – F-H-P-C. Beautiful scenery and a variety of wildflowers. A variety of campgrounds at various elevations.
12. IDYLLWILD COUNTY PARK – F-H-P-C. Summer mountain wildflowers. Interpretive center.
13. INDIO PALMS COUNTY PARK – H-P. Natural palm oasis; an unimproved facility.
14. JOSHUA TREE NATIONAL MONUMENT – H-B-F-C-P. Mohave desert plants and animals.
15. LIVING DESERT RESERVE – H-B-F-P. Live animal exhibits, botanical gardens, nature trails, interpretive center.
16. MT. SAN JACINTO STATE PARK – H-B-F-C-P. Reached from Idyllwild or from the Palm Springs Aerial Tramway.
17. PALM CANYON – H-B-F-P. Good spring birding in a large palm oasis.
18. RED CLOUD MINE ROAD – F. March-April, a wide variety of wildflowers along the road.
19. SALTON SEA NATIONAL WILDLIFE REFUGE – H-B-P. February-April, fantastic spring water fowl birding, especially snow geese.
20. SALTON SEA STATE RECREATION AREA – H-B-C-P. Good water fowl birding. Fishing and boating.



DESERT MAMMALS

The desert is home to a wide variety of mammals—everything from bats to bighorn sheep. There are over 40 species of mammals native to the Coachella Valley. Yet, when you take a walk at midday, nothing is stirring. The reason—most desert mammals are nocturnal. They avoid the dehydrating sun by spending the day far underground, or if they are too large to burrow, in the shade of a rock ledge or tree. Here they wait patiently for the cool of evening.

The desert literally comes alive at night. Deer mice, pocket mice, pack rats, and kangaroo rats emerge from their cool, humid quarters to forage for

seeds and other plant material which they carry back to their burrows. These small rodents in turn are hunted by nocturnal predators such as the desert kit fox. This tiny five pound hunter can hear mice moving in their tunnels underground. A quick pounce breaks open the tunnel and earns the fox a meal. Kit foxes will also eat large insects, snakes and lizards. Rodents must also be wary of bobcats, coyotes, badgers and ring-tailed cats, a relative of the raccoon.

Top left, Merriam's Kangaroo Rat; Center, Antelope Ground Squirrel; Right, young Black-tailed Jack Rabbit; Below, Coyote; Opposite page, Desert Kit Fox.



There are a few species which are active during the day. The commonest are the antelope ground squirrel and his close relative, the round-tailed ground squirrel. The largest of the desert mammals, the majestic bighorn sheep, also spends the day browsing among the rocky cliffs in the desert mountains where he makes his home.

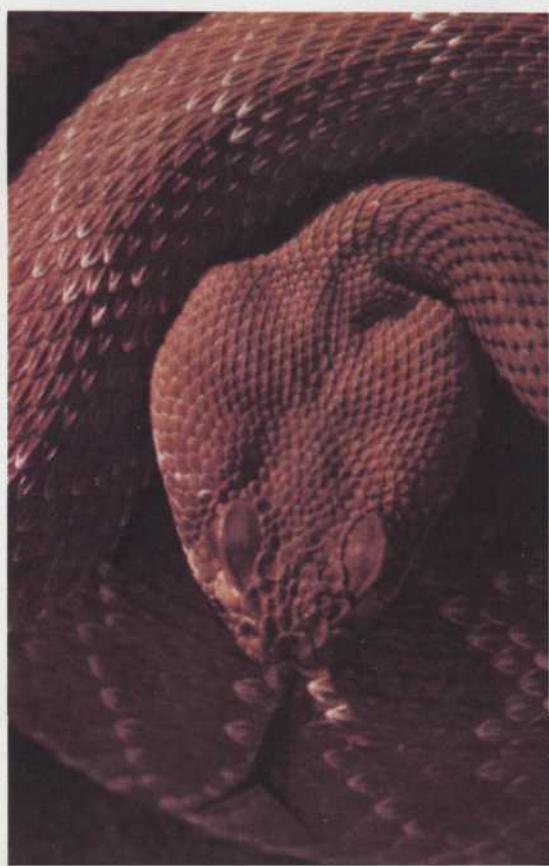
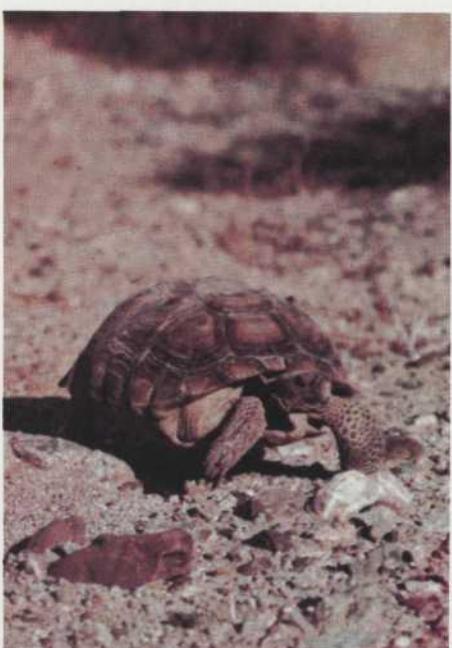
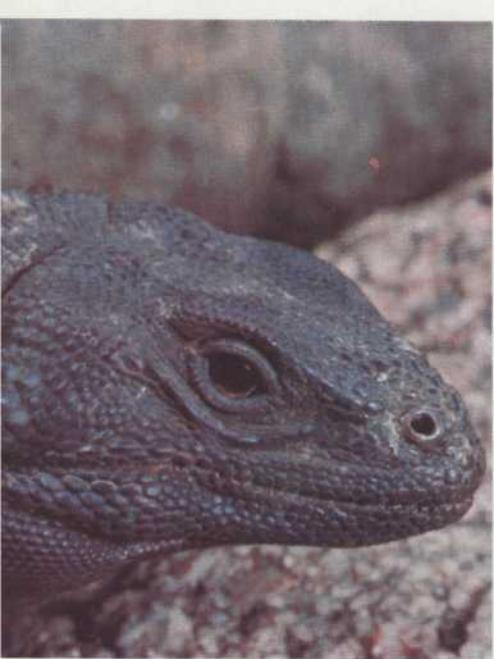
How can mammals survive the extreme temperatures and very limited water of the desert environment? As we have seen, most of the smaller species remain underground during the day. While the temperature outside may reach 120 degrees, the temperature in an underground burrow may be a comfortable 80 degrees. Moisture in the soil and from the animals' own breathing makes the burrow far more humid than the air on the surface. By staying in a cool, humid environment, small mammals like mice, and even the kit fox, do not have to waste water to cool their bodies. The kangaroo rat is so efficient at retaining water in his system he never needs to take a drink. He gets all the water he needs from the seeds that he eats.

Predators, such as the fox and the coyote, receive much of the moisture they need in the freshly killed food they consume. The antelope ground

squirrel, which is active during the day, has other internal mechanisms which allow his internal body temperature to rise without any ill effects, so he doesn't use much water cooling himself. The desert bighorn will spend the hottest part of the day in the shade. They can withstand dehydration far beyond the point that would cause the death of a human being. When there is plenty of moist plant material in the spring, bighorn may not drink more than every three or four days.

In McManus Hall you may have a close-up look at many species of small mammals. The Desert After Sundown Room, where the day becomes night, is filled with active kangaroo rats, pack rats, ring-tailed cats and other nocturnal species. The Dr. Raymond B. Cowles Medical Ward is the temporary home of Twix and Cricket, the desert foxes that are the mascots of the Living Desert, and Cindy, the coyote. Soon a large permanent enclosure will be built for them. Finally, the Reserve is cooperating with the University of California and the California Department of Fish and Game on research on the desert bighorn sheep. A two-acre enclosure houses a small band of rams, ewes and lambs of this endangered species.







DESERT REPTILES

For many people the words "rattlesnake" or "reptile" are synonymous with desert. While it is true that the desert is the home of a wide variety of lizards, snakes and even tortoises, far more reptile species make their home in the tropics where the less extreme temperatures are more to their liking.

The Coachella Valley is home to many species of lizards ranging in size from the four-inch banded gecko to the 14-inch chuckwalla. While most lizards are carnivores, hunting for insects, the chuckwalla is a vegetarian preferring to consume flowers and desert vegetation. At least two species of lizards, the collared lizard and the leopard lizard, eat other lizards.

Almost all of the desert's lizards are active during the day. In order to maintain their internal temperature within a comfortable range, they spend much of the day moving into the sun to warm up and retreating into the shade when they begin to overheat. A few species, such as the banded gecko and the yucca night lizards, are nocturnal and are able to tolerate cooler temperatures. There are only two poisonous lizards in the world, the gila monster and the beaded lizard. Neither is found in Southern California.

Opposite page: Clockwise from upper left, Zebra-tailed Lizard; Long-tailed Brush Lizard; Red Diamondback Rattlesnake; Speckled Rattlesnake; Chuckwalla; Desert Tortoise. Top left, Gopher Snake; Bottom left, Horned Lizard; Right, Collared Lizard.

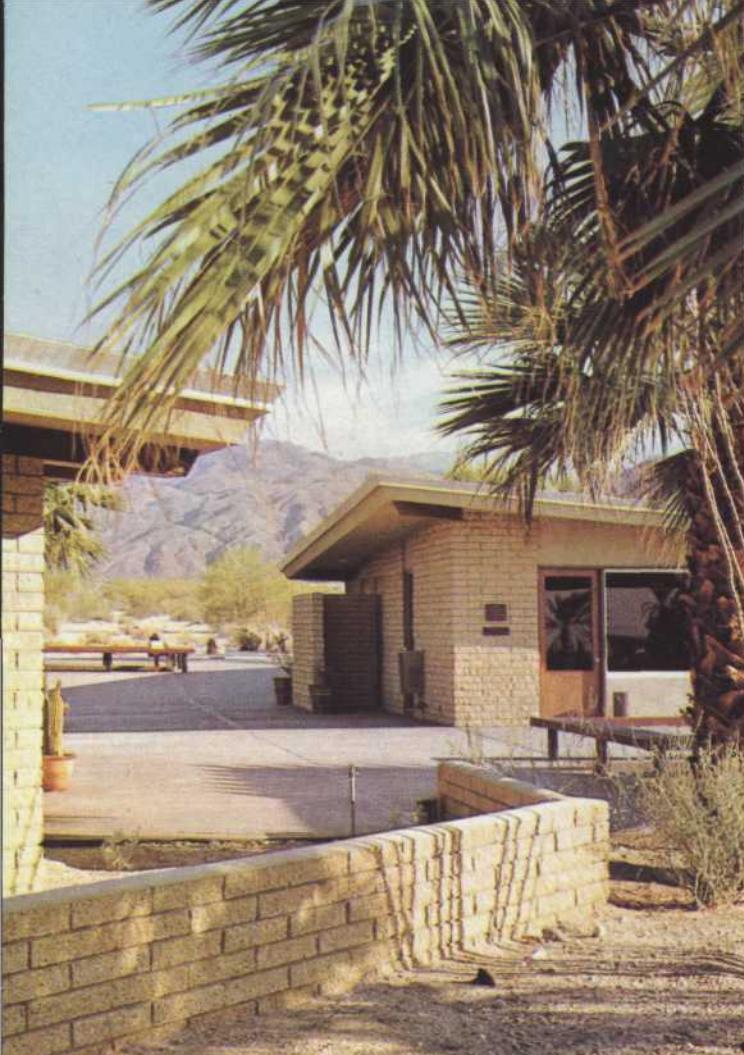
Many people are afraid to hike in the desert because of the chance of coming across a rattlesnake. While the Coachella Valley is home to five species of rattlesnakes, and over 12 species of non-poisonous snakes, it is very unusual to see them during the day. Most snakes are nocturnal, becoming active on warm summer nights. During the day they retreat into rock crevices, under a bush or down into a rodent burrow. Here they are safe from predators and from the heat of the midday sun. If they were forced to lay in the sun on a summer day for even a few minutes, they would die from over-heating. Therefore, your chances of seeing a snake during the day are small.

One of the most popular reptiles is the desert tortoise. These large, slow-moving land turtles are vegetarian. They browse on a variety of plants. During the summer months they are active during the early mornings and late afternoons when temperatures are less extreme. They hibernate during the winter underground in a burrow that might be 30 feet deep. Because they are becoming rare and are in danger of becoming extinct, desert tortoises are protected from hunters and collectors by law.

The Living Desert Reserve has a variety of desert reptiles on exhibit in Pearl McManus Hall. In the "Desert After Sundown Room" you will find rattlesnakes, king snakes, gopher snakes, banded geckos and many other nocturnal species. Many species of small lizards are displayed in the "Sunrise Room." Larger lizards and tortoises are exhibited in an outdoor enclosure near the entrance of the Reserve.

The staff of the Living Desert is cooperating with the California Department of Fish and Game on research on desert tortoises. Several acres have been set aside for this work just beyond the James Irvine Gardens.

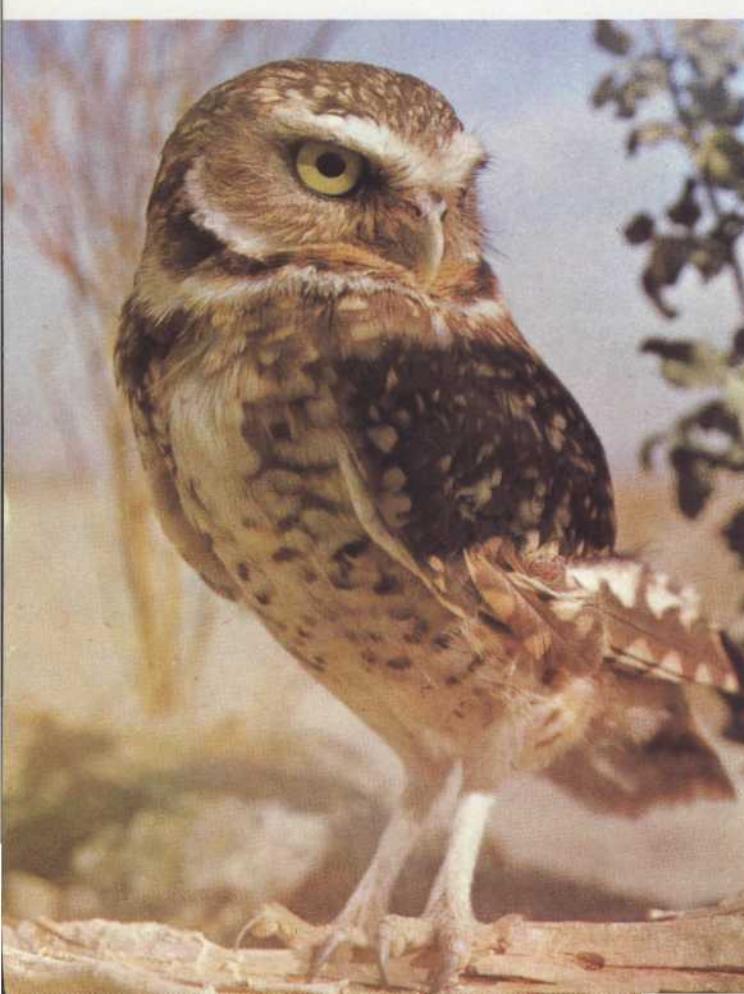
LIVING DESERT RESERVE



One of the Colorado Desert's most unusual interpretive centers for native plants and wildlife is found just a mile south of Palm Desert on Portola Avenue. This is the 900-acre Living Desert Reserve, rapidly achieving a wide reputation since its founding in 1953.

Living Desert, as the Reserve is generally known, is a privately-endowed membership organization dedicated to the preservation and interpretation of the native plants and animals of the Colorado Desert, with emphasis on education for the general public, particularly school children. Thousands of youngsters visit the Reserve each school year.

Currently, the facilities include two major exhibit buildings, McCallum Hall and Pearl McManus Hall, with capacity for large study groups, along with more than six miles of nature trails in a beautiful bajada, cove and wash bed area at the foot of Deep Canyon's huge floodplain. The Chase walk-through aviary has just been added to the visitor area, permitting a close look at the native bird life of the low desert in near-natural surroundings.



In addition to the natural surroundings, indoor displays of plants and animals, interpretive material on Indian artifacts and the complex geology of the region, Living Desert features the 15-acre James Irvine Gardens. These botanical gardens soon will feature examples of all of the major desert plant habitats of North America. Research for the development of the Gardens is carried on in the Bolz Development Center and the Hansen Lath House.

The trails are marked for self-guided tours and the Reserve's Curator of Education conducts frequent field excursions along the wide, easily navigated trail system. One trail climbs distinctive Eisenhower Mountain, officially named for the late president, a winter resident of nearby Indian Wells in his later years.

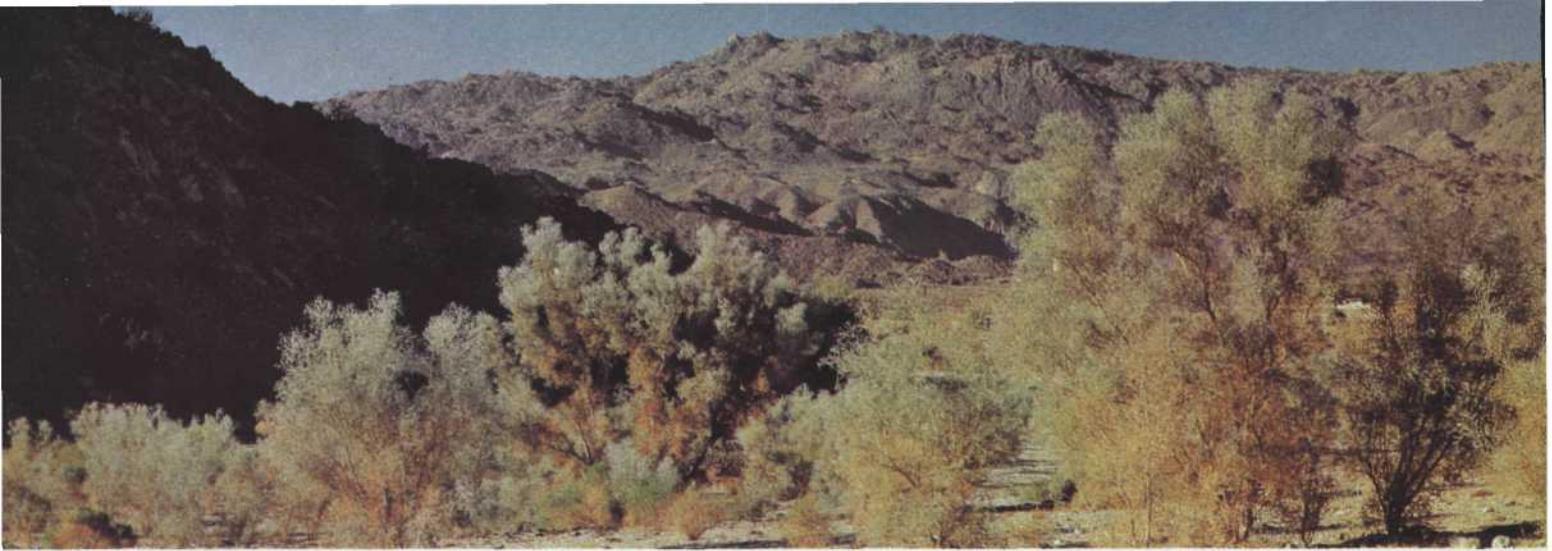
Classes and public programs also center in Living Desert's spacious McCallum Hall and field trips are conducted during season to many scenic high-points of the surrounding Colorado Desert.

The Reserve is administered by a professional staff and guided by a dedicated Board of Governors, several of whom having served since the early days.

A board of distinguished scientists serve as advisors to the staff and governing group.

The Reserve's present membership is well over a thousand, divided among student, individual, family and special endowment type memberships. Throughout its development, the organization has neither solicited nor accepted a cent of taxpayers' funds for its operation. Rather, memberships and special contributions have enabled the Reserve to grow each year.

It all began when a group of longtime desert residents and research specialists from nearby universities and agencies with the assistance of the



Palm Springs Desert Museum succeeded in securing a long-term lease on flood control acreage from the Coachella Valley County Water District. The agreement, which has been expanded since 1953, also include the U.S. Bureau of Land Management and the City of Indian Wells as willing participants today. The original 360-acre water district lease has grown to more than 900 acres and the site now encompasses virtually every type of plant and animal habitat in the low desert.

Until about 1970 there were no buildings, staff or organization. All that existed was a native palm oasis and a system of nature trails. Today, Living Reserve ranks as the finest example of preserved and protected natural land left in the Southern California desert. The membership program is open to everyone and all facilities are open to the public during the cooler months of the year. Living Desert is closed during June, July and August but that doesn't mean the staff is on a long leisurely vacation. During the hot summer much of the display maintenance and preparation work occurs.

One of the most important aspects of this continual program is a joint research program concerning

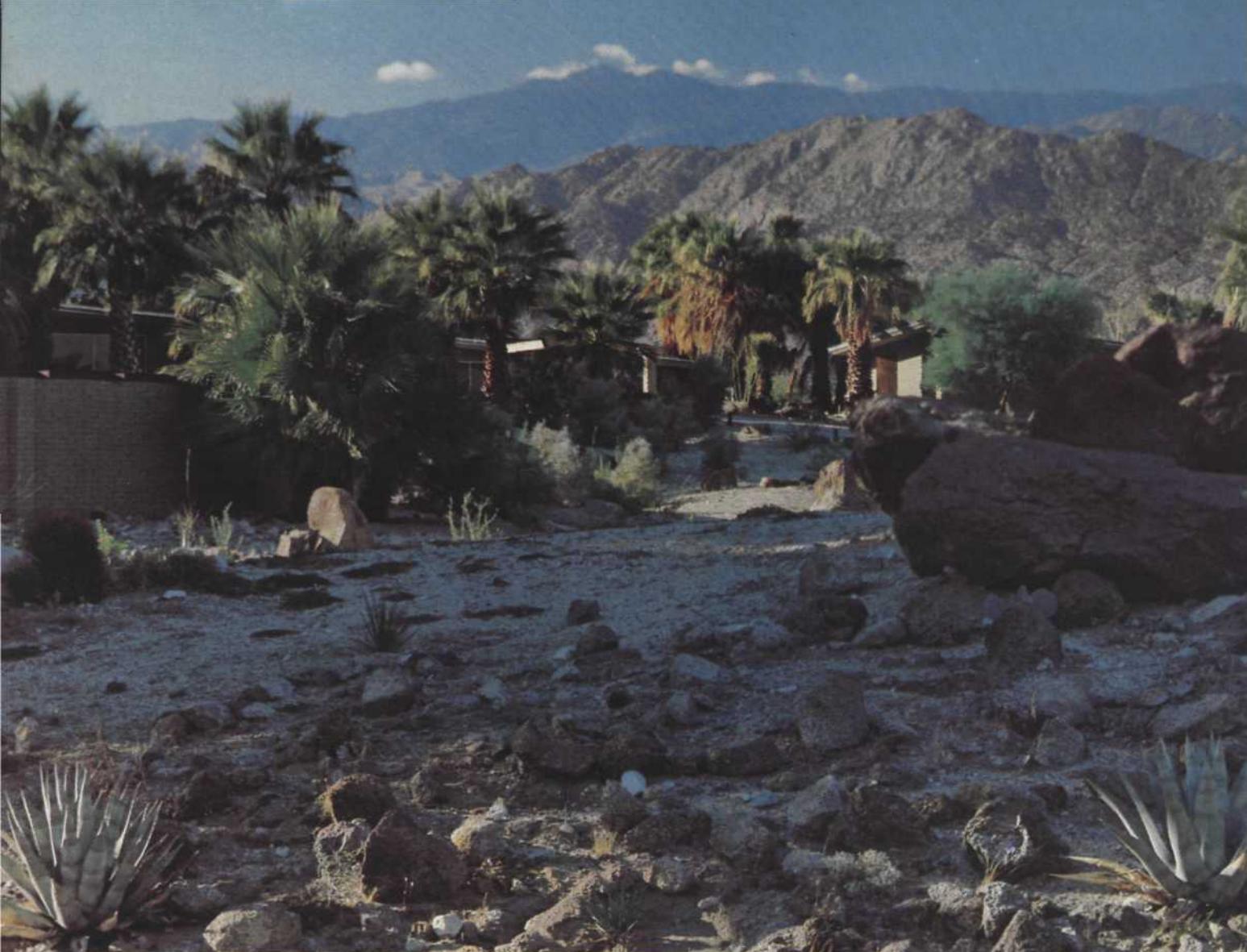
desert bighorn sheep, conducted with the University of California's Philip L. Boyd Deep Canyon Research Center, a facility for all types of desert environmental research, just two miles up Deep Canyon. Here, and at Living Desert, field researchers have been studying the behavior and physiology of this rare animal, the largest naturally-occurring mammal in the Colorado Desert, since the late 1960s.

Living Desert, therefore, performs a vital role not just for the pleasure of seasonal visitors and school children but also for the important studies relating to just how plants and animals are able to cope with, and thrive in the desert of North America.

The Living Desert Reserve is open every day from September 1st to June 1st. We hope that you will enjoy hiking the trails, viewing the many live animals, photographing the flowers and picnicking under the palo verde trees. The Living Desert Reserve is yours to enjoy.

Opposite page: [Top] McCallum Hall, [Bottom] Burrowing Owl. Above: Smoke Trees along the Nature Trail. Below: James Irvine Gardens, Mohave Desert Section.





THE LIVING DESERT RESERVE

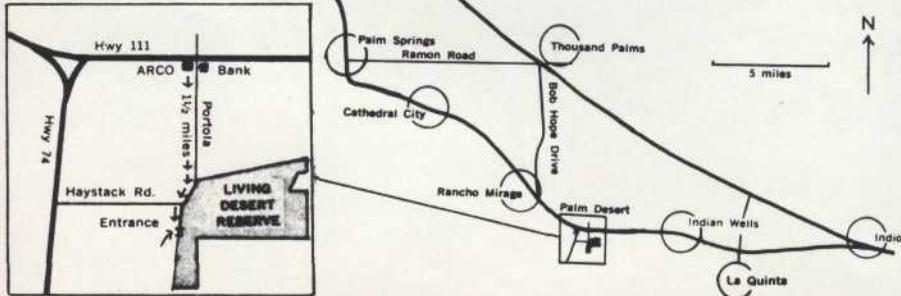
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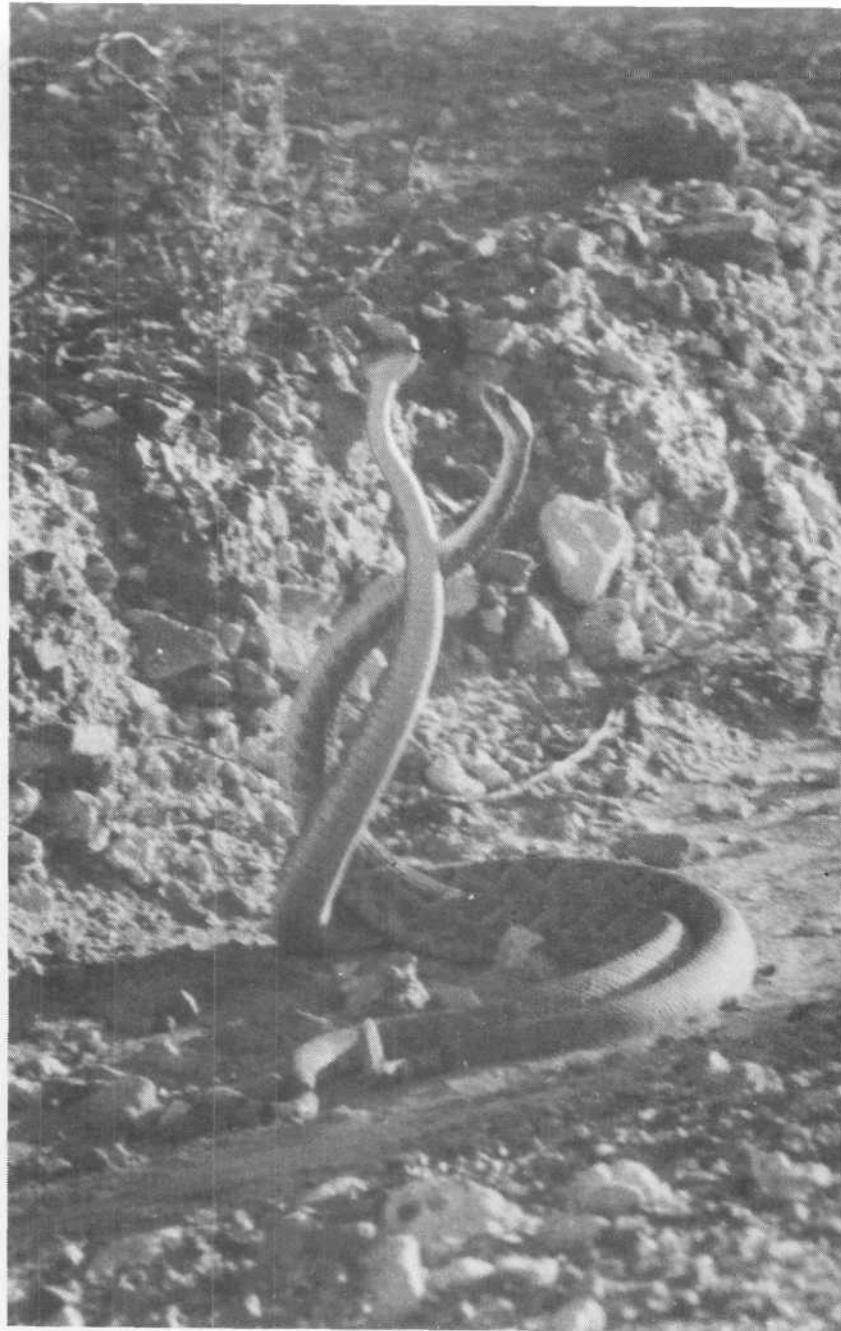
THE LOCATION



Mojave Rattlesnake “Male Combat Dance”

As Told To James K. Brady
by Ernest Bird

Editor's Note:
Ernest Bird
was in the
right place
at the right time,
with film in his
camera, to catch
this rare “combat
dance” sequence.



TRAVELING ALONG the 21 miles of graded desert road, which makes up the Ajo Mountain Drive in Arizona's Organ Pipe Cactus National Monument, we happened upon a strange event which is rarely witnessed by human eyes.

My wife, Nelda, was the first to see it; we were some 50 yards away at the time, and traveling along at a very leisurely pace in our truck. I'll let her tell you about what she saw.

“Well, I saw a couple of sticks, at least that's what I thought at first, sticking up by the side of the road. I was startled by the fact that they were moving. Why, I wondered; the wind wasn't blowing—nothing else was moving?”

We were closer now, and Nelda had alerted me to the fact that she had seen something. She pointed out the objects to me; they were just off the shoulder of the road. I stopped the truck quickly and we gazed upon a spectacle which sent shivers up our spines.



The sticks were really two very large rattlesnakes! They were swaying rhythmically, moving as if synchronized to the beat of some mystical music not perceived by our human senses, and perhaps performing a dance which had some ritualistic significance or symbolic meaning. Their heads, which were inclined some 60 to 70 degrees from their scaly bodies, were only inches apart as they peered into each other's eyes almost hypnotically. Their tongues flicked in and out nervously, yet in perfect harmony with their swaying motion. The head and more than a third of the body of each was raised upright, loosely entwined like the strands of a frayed rope. The remaining part of the body of each lay parallel to the other and formed a semi-circle on the arid desert floor.

They swayed gracefully back and forth; one leaned against the other and was being pushed against in return. The minutes passed; the pressure of contact was obviously increasing; the conflict between them mounted. Their bodies slipped apart; the rhythm was interrupted; one of them fell to the ground, writhing as he caught his balance. The other

towered above, maintaining his poise.

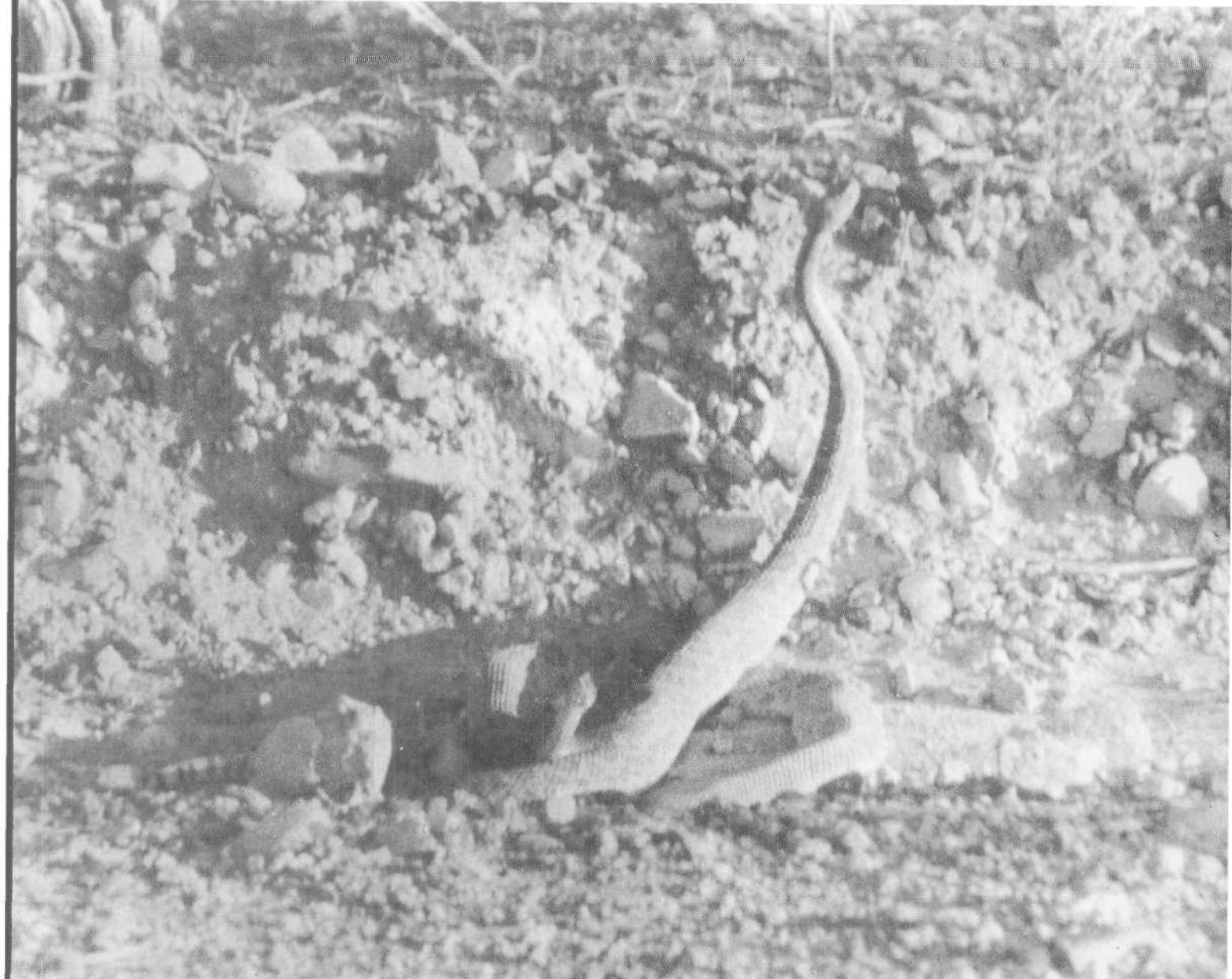
Several moments passed—they again entwined—they swayed—they gazed—the pressure of contact intensified—there was a slip—a fall—perhaps a different winner—it began again.

We were still about 40 feet away from them and I decided to get out and take a closer look. I moved as close as I dared, within eight feet, and one of the snakes lowered his head and kept it hovering just inches above the ground. It also made that rattling noise for which it is famous. I decided to get back in the truck so that I wouldn't scare them off.

After a few minutes the snakes decided that I wasn't anything to worry about and continued with their dance.

I still wanted to get a closer look—but perhaps from a safer vantage point this time. I let the truck roll closer to them. Our view was excellent.

They were somewhat disturbed by our presence and kept their heads pointed in our direction a good share of the time. However, at times they became so completely engrossed in each other that they paid no attention to us at all.

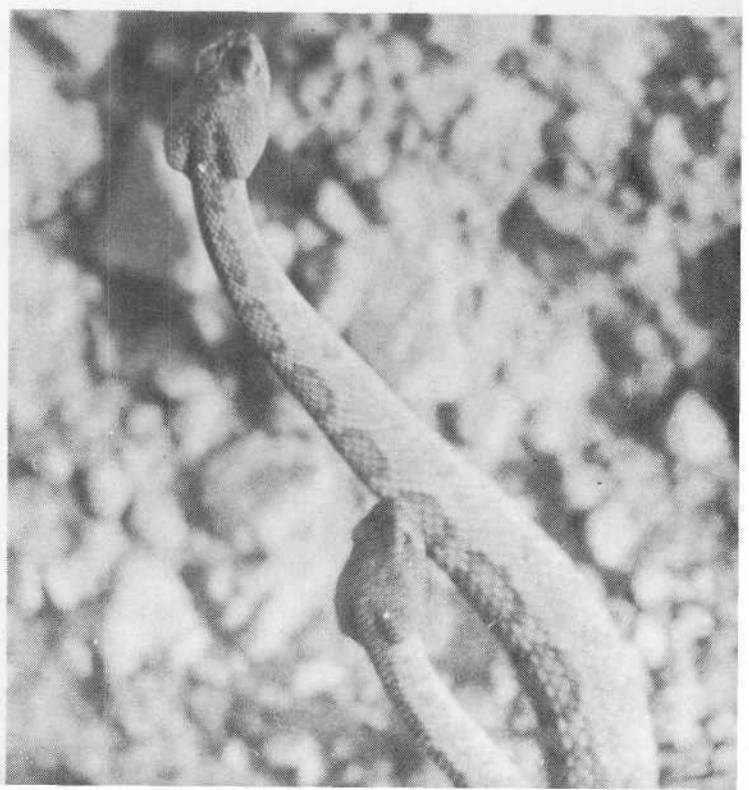


We commented that it was probably some sort of mating dance, but we had no way of even knowing what sex they were. We weren't about to check that out, if we had known how.

After we had observed the dance for 10 to 15 minutes, a car pulled in behind us and we decided to move out of the way so they could get a better view.

Later on, at a view point farther down the road, the same car pulled in behind us again. We asked them what they thought about the snake dance. They said that they didn't get to see too much of it. Apparently the snakes had about done their thing when we had left. They told us, however, that the snakes headed off into the desert in opposite directions.

We stayed at the campgrounds in the monument overnight. On our way out the next morning we described the event to the rangers at the Visitor's Center, and they told us that it was, more than likely, a "male combat dance," between two males, rather than a "mating dance" between a male and a female. After studying many books on snakes, it is clear to me that that is exactly what it was. □



VALLEY OF LITTLE SMOKES

by MARY FRANCES STRONG
photos by Jerry Strong

NEAR THE California border in western Esmeralda County, one of Nevada's magnificent valleys separates the towering White Mountains from the majestic Silver Peak Range. The variety of recreational activities which may be enjoyed here are not well known. Yet, it is a combination not often found in a single desert locale.

Within the valley's 200 square miles lie prehistoric and recent Indian sites; century-old mining camps; excellent rock collecting areas; historical points of

interest; streams to fish; a small lake for swimming, as well as an imposing array of majestic geological formations. Everywhere you go, there are reminders of the past. The "Valley of Little Smokes" has played its part in the history of Nevada and the development.

Known today as Fish Lake Valley, ranches still flourish on many of the early homesteads. Due to climatic and soil conditions, a very desirable alfalfa hay—rich in protein—is grown here along with the most delicious apples we

Above the playa shoreline on the west side of Fish Lake Marsh, one of the early structures associated with the production of borax stands resolutely against the elements. It is constructed of carefully integrated tufa blocks that were quarried nearby

have ever tasted. Only two businesses serve the little community—Dyer Post Office and Valley Center Store. The latter provides very limited groceries, gasoline and a bar.

There is a great deal of resourcefulness among the modern settlers in Fish Lake Valley. They prefer to "do for themselves." Among their many achievements are a fire station, ambulance service, community building and park. The latter offers free overnight camping which we have enjoyed many times. Preservation of the Valley's historical heritage is also important to its people. Future plans include a museum to house the many early-day relics that have already been collected. Pride in the land—the valley and its history—well describes the community spirit.

There is evidence that Indian tribes occupied this region over a long period of time. All the necessities of Indian life were close at hand. Spring-fed creeks rushed down into the valley from the high mountains. The resultant lakes and marshy areas provided nesting grounds for water and land birds. Wild hay proliferated and game was plentiful in both the valley and mountains. There were roots to gather and fall trips were made to higher elevations for the harvesting of pine nuts.

This remote valley must have been "paradise" to the Indians but it was also destined to be very appealing to early settlers. By 1860, homesteaders had taken up land along the creeks and ponds south of the Volcanic Hills.

It was only natural that the Indians would resent the intrusion and take-over of their lands. When raiding parties began attacking isolated ranches and mining camps, a detachment of troops was dispatched from Camp Independence, California to the valley in December 1866. A temporary camp was set up at Fish Lake and the region regularly patrolled. Hostilities soon ceased and "Fish Lake Camp" was abandoned in July 1867.

Life was harsh in Fish Lake Valley but the ranchers prospered. During the mining booms of the 1860s to 1880s, wild hay and garden vegetables were freighted to Silver Peak, Blair, Candelaria, Gold Hit and the borax operations on Columbus and Fish Lake Marshes. Close to a thousand cattle grazed in the valley and provided meat for miners' tables. A





mercantile store on the Chiatovich Ranch, later known as Arlemon, supplied provisions for nearby mining camps.

Chiatovich, McAfee and Leidy Creeks and Dyer Post Office were so named to honor the early pioneers. While it is impossible to name all of those who played a part in the settlement of the valley, the names Hale, McNett and Aiken deserve mention here.

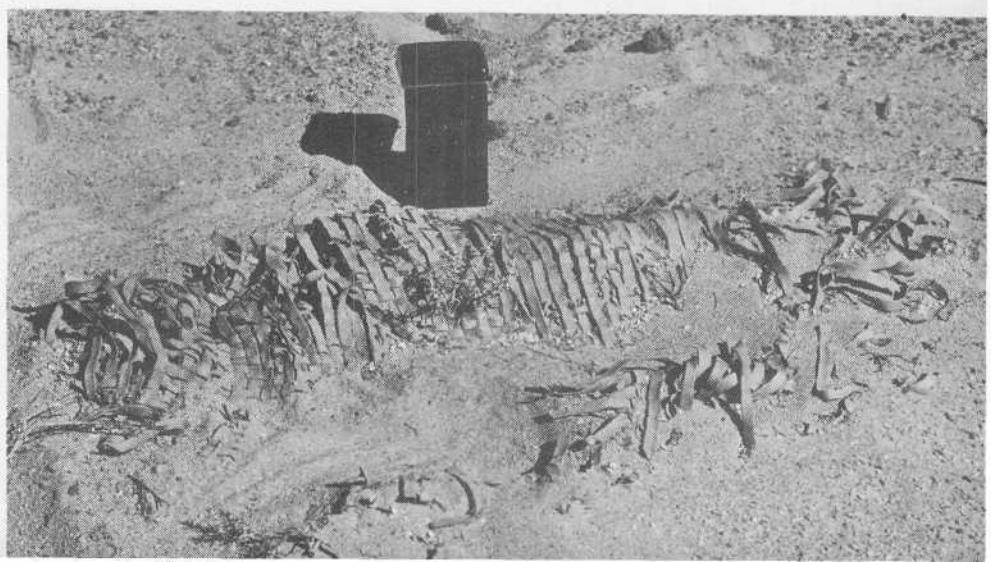
The northern part of the valley, containing Fish Lake Marsh, remains much as it did when the Indians called the valley home. This is pristine land of boldly-colored formations and mountains. The smooth whiteness of the broad playa reflects the brilliant rays of the midday sun then turns to a gorgeous orange in late-afternoon light. Almost surrounded by mountains, it is a land to wander in, to explore and enjoy the remnants of its early days.

Grading has improved the original trails—the one circling the marsh; the route over Emigrant Pass; the Cave Springs Trail to Silver Peak and the East-side Road. Winds often deposit a little "blow sand" on sections of the road around Fish Lake Marsh. In wet weather, the Eastside Road from "The Crossing" south to Old Dyer Ranch is

impassable. However, stock cars—even those pulling trailers—shouldn't have any problems in good weather. The County Road Department does an admirable job of road maintenance, even though there is not a single resident in Northern Fish Lake Valley.

Mining in the valley dates back to 1863 when lead and silver deposits were discovered on the western slopes of the Silver Peak Range a few miles east of Dyer. Only a small amount of ore was produced. In 1873, borax mining began at the claims of Mott and Piper on Fish Lake Marsh. Their success interested the

Though small, Fish Lake [above] is like a jewel set in an arid wasteland and must have been a welcome sight to thirsty travelers in early days. The lake and adjacent marshy areas still provide sustenance and shelter for a variety of wildlife. Near an Indian chipping ground, we encountered a half-exposed [below] object we thought might have been a cradle. It is constructed of interwoven, narrow strips of leather that have become brittle with age. [Identification would be welcomed. Camera cover equals three and one-quarter inches wide.]





Obsidianites of good quality, color and pattern may easily be collected on the upper slopes to the west of Fish Lake Marsh.

Pacific Borax Company—then operating on Columbus Marsh, four miles north. Two years later, Pacific Borax moved their mill and workers to the southern end of Fish Lake Marsh where they recovered considerable borax from "cotton ball ulexite."

A small community consisting of about 40 adobe and frame buildings sprang up north of the mill. Fish Lake Post Office served the community from October 1881 to February 1887.

Many Orientals were employed to do the hard, manual labor and, while they worked harder, their pay was always less than that of a white man. Generally, the Orientals were not permitted to live within the main community and this separation probably existed at Fish Lake. At least our personal explorations seem to indicate a sizable group of Orientals lived east of the mill.

Over many years, Jerry and I have found numerous Oriental artifacts—mainly in one area. Our favorite items include a Chinese coin; an opium can with label intact after some 90 years; a pair of embroidered Chinese slippers; opium bottles and several woven ore-carriers. The latter consist of two bags connected by a strap which rested on the

neck and shoulders. This allowed two bags of ore to be carried at one time. Human energy, not mechanical skip loaders, dug and hauled the ore.

Hundreds of rice bowl fragments occurred in our dig, as well as on the ground around it. The china was of fine quality—very delicate and ornamented with a simple brush design. Oh, how I longed to find just one perfect bowl! Though we dug and dug, none turned up. When Jerry uncovered a half-bowl surrounded by chips in an area where we hadn't run into chips, I decided a repaired bowl was better than nothing. The chips were carefully placed in a bag and that winter I spent a whole week of evenings trying to put it together. Finally, I had to accept the fact that the chips were not "soul mates" of the bowl.

We have spent considerable time exploring northern Fish Lake Valley and in the process Jerry has located a number of old Indian campsites. At one, he found the wind had exposed what he thought might have been a cradle. We do not disturb, remove or excavate anything from such sites. Hopefully, archeologists will eventually study this region and learn more about the prehistoric, as well as more recent Indians. We enjoy finding a

site and speculating about its original usage. Please bear in mind the Antiquities Law prohibits destruction of any archaeological site.

The old borax workings are interesting to visit and several are indicated on the accompanying map. Square nails and an occasional bottle may still be found in these areas. On one of our visits Jerry rode his trailbike along a dim set of tracks on the westside of the marsh. His "finds" included a dandy Mexican Mustang Liniment, a blown-in-the-mold whiskey and same circa beer bottle. In the old days, when a bottle was finished, it was tossed off to the side of the road—same as today. Don't overlook the possibility of finding a collectable bottle or two along an unused trail. Jerry has made a number of good finds this way.

The Volcanic Hills and Silver Peak Range crowd to within a stone's throw of one another at the northern end of Fish Lake Valley. Their peaks are very colorful in shades of brilliant iron-red, yellow, white, gray, black and chocolate brown. At times, water has drained from Fish Lake Marsh through the narrow canyon into Columbus Marsh to the north. About mid-center in the canyon, Gap Springs bubbles forth into a pond filled with cattails and wild hay. East of the road a small earthen dam holds the spring's overflow. The area is quite refreshing with its grassy meadow, trickling water and ponds. Near the spring are remnants of former occupation—tamarix trees, old cement foundations and rusty cans of early vintage.

Across the canyon from Gap Springs lie the ruins of what appears to have been a mill site. There was no sign of any ore or a dump—just a small pile of finely-screened material. Another set of cement pilings, foundation and pit lie a short distance north. Just south of Gap Springs, a two-track road gives access to this area. Proceed with caution across the playa and don't proceed at all if it is wet.

Rockhounds have long enjoyed collecting "obsidianites" on the alluvial slopes west of Fish Lake Marsh. They can be made into nice cabochons or tumbled with good results. I have also seen some lovely faceted stones cut from specimens found here. Most of the obsidianites are translucent and occur in black, brown and...ahogany colors. There are banded, clear, low, picture and silver sheen

types. To check the "type," place specimen over the end of a flashlight and block the surrounding light by curving your hand around the side of the stone. When collecting, be sure to have the sun at your back or you will not be able to see the specimens on the ground.

Following the Eastside Road from "The Crossing" south to Fish Lake, you will cross the lower end of the marsh then pass Old Dyer Ranch and cemetery. Drive slowly as you approach Fish Lake and maybe you will see, as we did, a majestic Bald Eagle take to the air.

If you enjoy fishing, try Chiatovich, McAfee or any of the several creeks on the westside of the valley. For the adventurous, there are numerous dirt trails leading into the hills and mountains surrounding the valley.

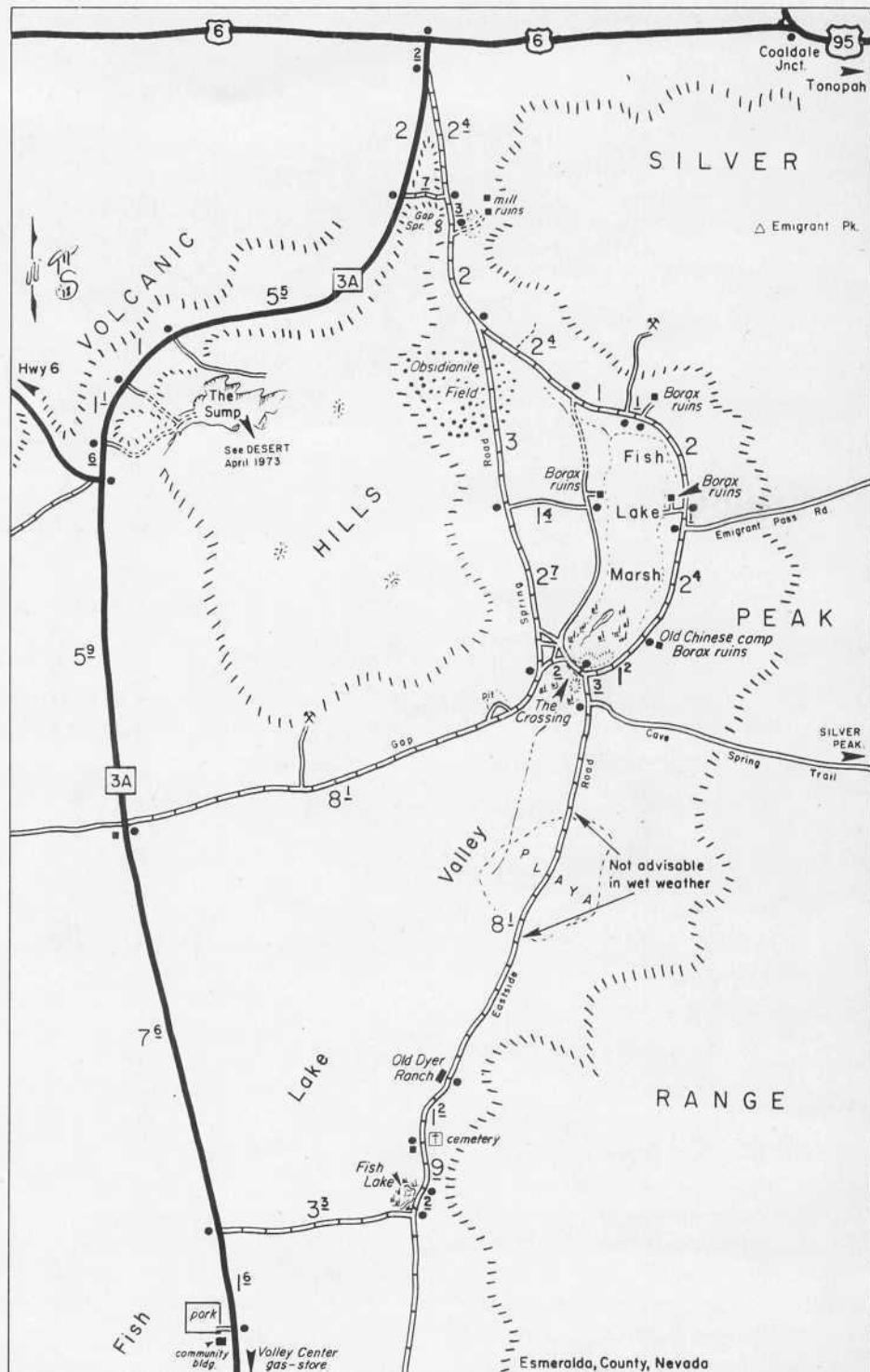
A trip to Fish Lake Valley would not be complete without a visit to "The Sump." Here the forces of erosion have carved a colorful canyon of unusual formations. Be sure to have your camera along. A buried petrified forest and fossil deposits have also been exposed. (See *Desert*, April 1973, for details and map.)

Over the years, we have met some of the valley's residents and enjoyed a pot luck dinner, as well as several special programs in their community building. It was good to see the friendliness they show visitors and the pride they have in their valley.

Late one evening, several years ago, we were startled by a knock on our trailer door. It was Herschelle and Genevieve Hanson, local ranchers and authors of a book, "Unsung Heroes of Esmeralda County"—containing some of the valley's history. The Hansons were not strangers. We had met them on an earlier trip and the previous evening had enjoyed their hospitality.

However, Herschelle was all business as he said, "I want to make a deal with you, MF. I will give you a sack of those apples you liked so well if you will let Genevieve ride your trailbike." Well—I really drug my feet, since I knew Genevieve hadn't been able to handle another model. I was afraid she would get hurt, but the fellows overruled me. The bike was fired up and Genevieve took off like a scalded dog. When I could finally bring myself to look, she was riding like an old pro.

It seemed that Genevieve had to move the irrigation sprinklers on their alfalfa



fields when Herschelle was away. The many long walks were proving too much for her. She had tried to use a trailbike but her feet could not reach the ground and she took several bad spills, I, too, had encountered this problem. We are both too shortlegged. The deal was consummated and we happily enjoyed the apples. Later, Genevieve wrote me "she was doing fine on a bike like mine."

When exploring Fish Lake Valley, it is easy to visualize the many Indian camps that once were here. They would sit huddled around their fires, content with

what the Great Spirit had bestowed that day. It must have been the myriad of tiny smokes drifting skyward that gave rise to the nickname "Valley of Little Smokes."

This reminds me of a familiar Indian saying, "White Man build big fire and sit back—Indian build small fire and sit close." The Indians tried to conserve their natural resources. We, who followed, have not. Perhaps, we can learn to sit close and use less of our resources. To do this now would insure that pristine desert land will remain for future generations to enjoy.

A VALLEY OF UNLIMITED RECREATION

by BILL JENNINGS

RECREATIONAL ROADS radiate from California's Coachella Valley in all directions—freeway and jeep trail—and an hour's travel from either Palm Springs or Indio will bring the winter and early spring visitor to a wide variety of day or overnight attractions unmatched anywhere else in the Southern California desert.

You can fish at a commercial trout hatchery along a sierra-like stream bubbling out of the San Bernardino Mountains. You can fish on North America's only below-sea-level saltwater lake. You can ride an aerial tramway as part of a half-day hike up a nearly 11,000-foot mountain peak. You can visit the nation's only commercial date gardens or you can walk through any of several native palm groves.

The variety is so great, and there's so much to see, that this brief roundup will just whet the interest of the visitor, and

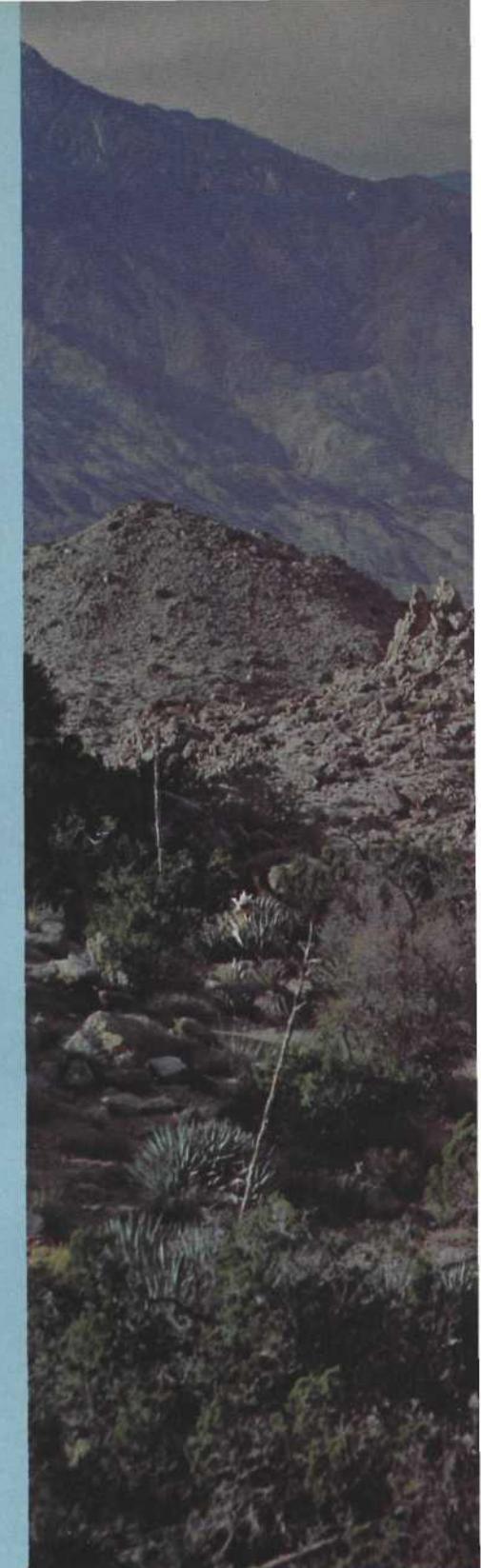
Palm Springs lies on the valley floor in this view from high in the Santa Rosa Mountains.

*Photo by George Service
of Palm Desert, California.*

the desert resident. There's a good chance we'll leave out more than we include but at least we can hint at the wonderland surrounding you.

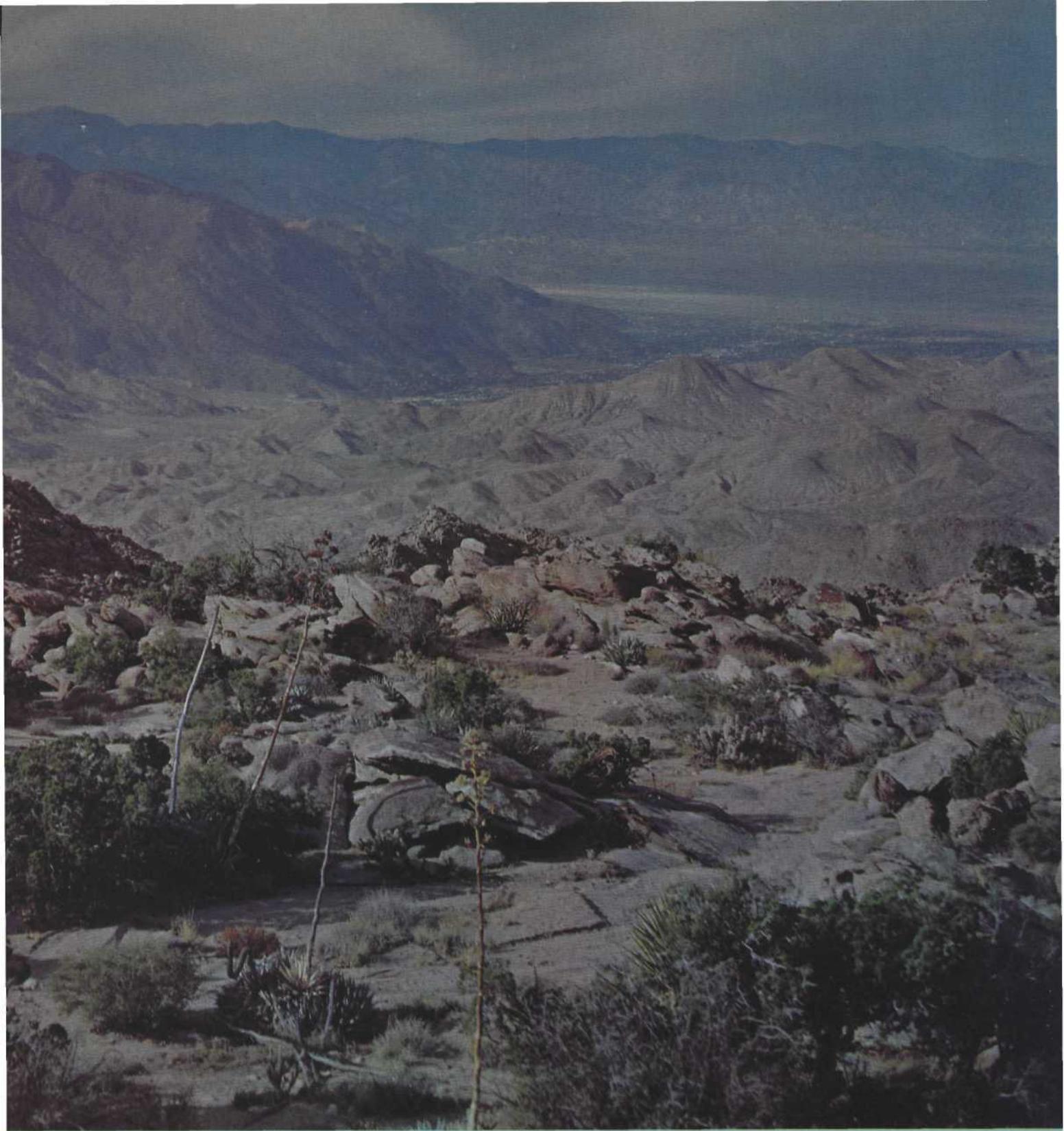
TO THE WEST

West of the valley rise the twin ramparts of the San Jacinto-Santa Rosa and San Bernardino Mountains. Good highways link several public camps and commercial attractions. The only possible deterrent to your visit may be snow this time of year. A telephone call to the California Highway Patrol or State Depart-



ment of Transportation will help determine your itinerary. Some of the roads may be closed briefly due to snow, even when the desert floor is 80 degrees.

The Forest Service maintains several campgrounds in the Idyllwild-Garner Valley-Santa Rosa region. District headquarters are at Idyllwild and reservations are recommended. The closest camp is at Pinyon Flats, with pit toilets,



limited water and no available firewood. Take Highway 74, the spectacular Palms-to-Pines scenic route, from Palm Desert. It's a 16-mile run up a 4,000-foot escarpment.

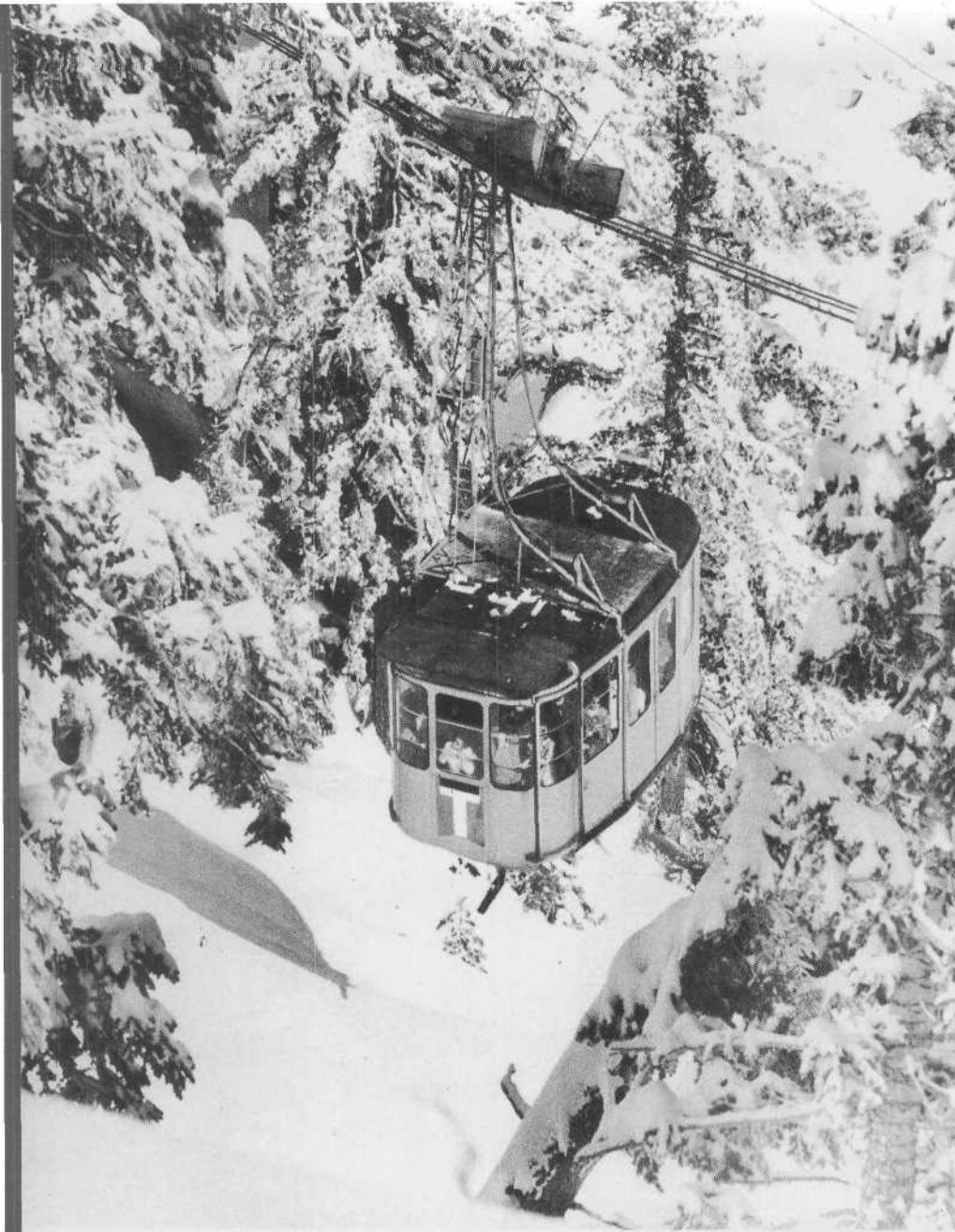
Just beyond is the graded dirt road to Toro Peak and Santa Rosa Mountain, the highest points accessible by private car in Riverside County. There are two small campgrounds above the 8,000-foot level

but they'll be cold and windy this time of year. Santa Rosa is recommended as a day trip, with an incomparable view across the desert into Mexico and Arizona.

Lake Hemet, an irrigation reservoir maintained by the Lake Hemet Municipal Water District, is the major scenic attraction in the Garner Valley, another 15 miles northwesterly along Highway

74. Limited facilities for the day visitor are available. To stay overnight you'll need your own trailer or camper. There's a store, with the area's only supply of firewood, and water is plentiful.

Small Forest Service campgrounds on Thomas Mountain are accessible via a typical forestry truck trail sometimes blocked by snow. Views from this winding road are also spectacular, mainly to



Rising high above the valley floor, the Palm Springs Aerial Tramway is a fantastic fun ride.

the west and south. You can even see the Pacific Ocean on a clear day.

The Idyllwild area offers the most camping, picnicking and day-use facilities in the mountains to the west of the Coachella Valley. Both the San Bernardino National Forest's San Jacinto District and the Mt. San Jacinto Wilderness State Park offer day-use as well as overnight camping units and an integrated trail system culminating in the San Jacinto Peak summit, 10,786 feet. The view from the peak is breathtaking anytime of the year, particularly so in winter if snow permits the hike.

A new but rapidly growing segment of the Idyllwild area camping and day-use system is the network of Riverside County parks. A well-equipped interpretive center at Idyllwild County Park is well worth a visit.

On a scenic loop trip from the desert up Highway 74 to Mountain Center, the Idyllwild stopover marks a convenient halfway point. State Highway 243 connects Route 74 with Interstate 10 at Banning and the entire loop, from Palm Desert to Palm Springs is just under 90 miles, an easy three-hour trip.

Just east of the Palm Springs junction on I-10—where State Highway 111 heads southeast to the resort city, is Whitewater, the remnants of a once-flourishing highway rest and service station stop now mainly known as the entrance to the Rainbow Rancho at the

end of Whitewater Canyon Road, the only public mountain trout fishing spot in the Coachella Valley area. No license is required, just a use fee and a charge for fish caught.

TO THE EAST

The primary scenic attraction on Coachella Valley's immediate northeast border is Joshua Tree National Monument, which offers high desert vistas for all-day motoring, picnicking or overnight camping. Two main entrances are reached off State Highway 62 in the Yucca Valley-Twentynine Palms area on the north boundary of the huge monument and a third, via Cottonwood Spring, is off Interstate 10, 24 miles east of Indio.

This time of the year, Joshua Tree offers generally cool, crisp days and often a touch of frost overnight. The chances of rain or snow are slight but a call ahead might be a good idea. Monument headquarters at Twentynine Palms can provide accurate road and weather information and also confirm whether you will find camping space when you get there.

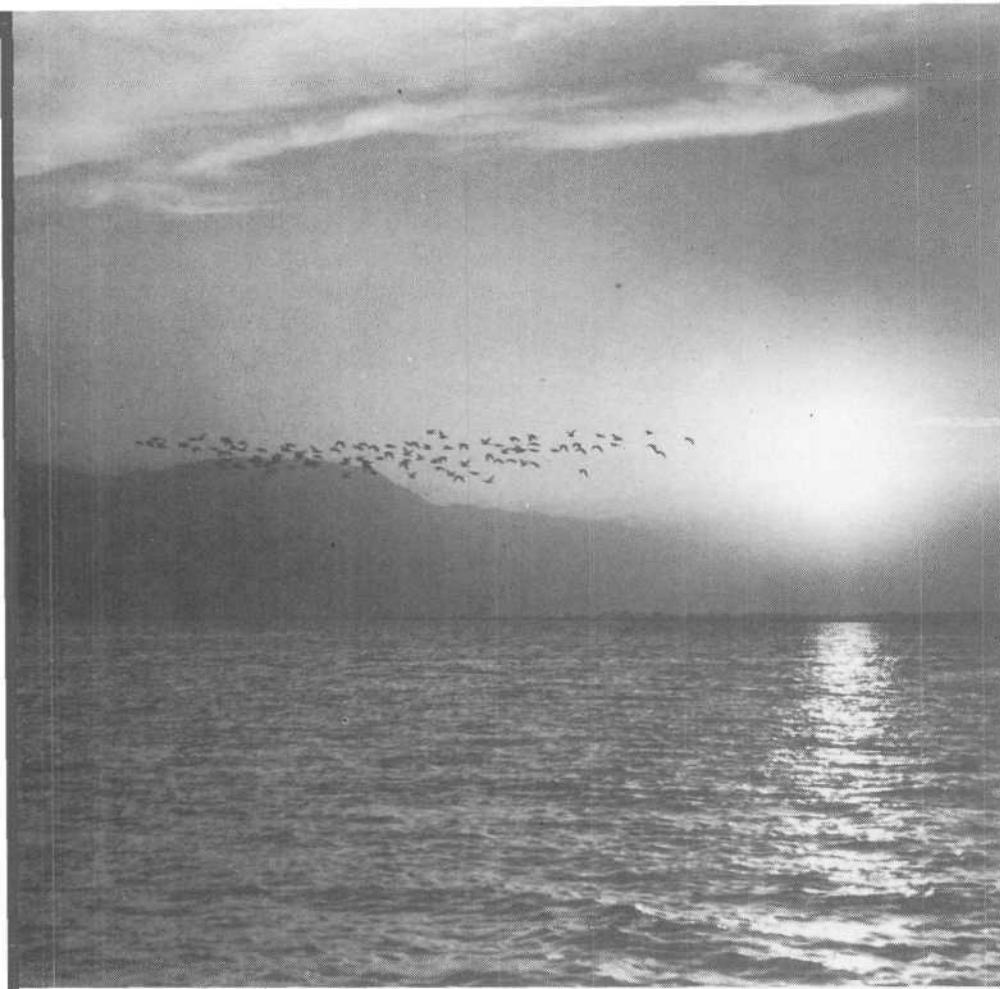
The northern entrances are at Joshua Tree, 37 miles from Palm Springs, and at Twentynine Palms, an additional 15 miles to the east. The headquarters complex just south of Twentynine Palms include an excellent small interpretive center near the historic Chemehuevi and Serrano Indian palm oasis that gives the region its name.

TO THE SOUTH

South of Palm Springs and Indio, within the huge Coachella-Imperial Valleys basin, are several easy-to-reach tourist attractions, particularly the sprawling Salton Sea State Recreation Area along the so-called north (actually northeast) shore of the vast inland salt lake, now about 232 feet below sea level.

The state headquarters near North Shore and Desert Beach includes a new interpretive center where rangers and static displays offer an insight into the colorful mining, transportation and military history of the entire Colorado Desert as well as an easy lesson in natural history. There are several more campgrounds reaching south into Imperial County along a 20-mile stretch, plus unlimited fishing and boating facilities, both under state and private control.

On the west or south side of the sea,



along State Highway 86, the date, vegetable and citrus farming areas of the valley come to an abrupt halt at the county line near Travertine Point, 26 miles southeast of Indio.

This is also the northern boundary of the nation's largest state park, the 600,000-acre Anza-Borrego Desert State Park. Most public facilities in the park, however, are an additional 30 miles to the southwest near Borrego Springs in San Diego County. Numerous winter camping areas are along the connecting Borrego-Salton Sea Way, a county road connecting State 86 at Salton City with Borrego Springs.

Most of the attractions outlined thus far are from one to three hours from the heart of the Coachella Valley, even at a leisurely and legal 55 miles an hour.

Closer to home, however, there is a network of county park and recreational sites that can be reached in half-hour travel jaunts from Indio. The best known of these is a new aquatic wonderland, Lake Cahuilla, operated by the Riverside County Parks Department, utilizing the reserve or spill water from the Coachella branch of the All-American Canal through the efforts of the Coachella Valley County Water District.

A flock of birds present a pretty sight at sunset on the Salton Sea.

Lake Cahuilla, at the south end of Jefferson Street near Avenue 58, offers fishing as well as picnicking and other shore recreational activities. Boating, group camping (by reservation), nature study, horseback riding and hiking are included in the expanding list of things to do at Lake Cahuilla. A county park interpretive specialist is stationed here as well.

The man-made lake, covering 135 acres at the foot of the Santa Rosa Mountains, is the principal unit of the county's expanding Coachella Valley park and historic-site network.

Others include the yet unimproved Indio Palms park, centering around the ancient Indian site at Pushawalla Palms Canyon, 10 miles northeast of Indio along Washington Street. This is a rugged area, with no water available for hikers and only an unpaved desert-track style road for limited access. Inquire at Lake Cahuilla before you venture off Washington Street.



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Further to the south are the unusual Fish Traps Park and the beautiful Mecca Hills or Painted Canyon Park. The Fish Traps, a remnant of the Cahuilla Fishing culture of 500 years ago, are located just west of the Valerie Jean Date Shop on Avenue 66 near its junction with Jackson Street.

Archeologists and other anthropologists are still wrestling with the mysteries of these strange rock semi-circular openings along the shore line of the old Lake Cahuilla or Blake's Sea, a once vast freshwater lake formed by the Colorado River 1,000 or more years ago and persisting to the time of Columbus.

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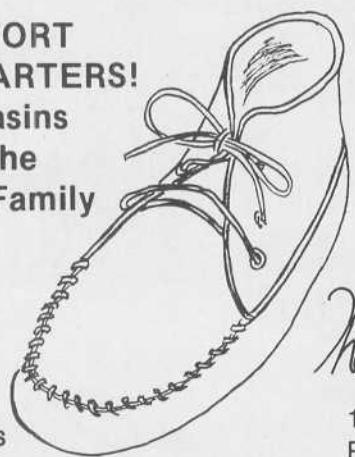
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There are no facilities at the Fish Traps and you may have trouble finding them unless you follow these directions. Drive to the west end of Avenue 66 and pull off in the little palo verde and cat-claw thickets just before the road enters a citrus ranch. The traps are along the hill slope to the west and just above the road. It's best to climb the hill a few hundred feet and then look down into the traps. The shadows created by the sun will outline them clearly.

Mecca Hills, on the other hand, is easy to find and offers plenty for a day or half-day visit. The park road is plainly marked off State Highway 195 five miles east of Mecca, where State Highway 111 begins to head gradually eastward to parallel the Salton Sea all the way to Niland. A half-day trip just along 111 to Niland, with a stopover at Imperial County Mineral Spa and other natural hot springs just below the Imperial County line, is well worth the extra time.

At Mecca Hills, the county has installed picnic tables and ramada shade shelters but the main attraction may be a leisurely hike into one of the narrow side canyons that range in hue from near black to light red. Sandstone shapes and tones provide a photographer's paradise here and even when the wind is blowing out in the valley Mecca Hills park is generally a quiet haven.

The park access road is plainly marked off State 195 just east of the crossing of the Coachella Canal. From Indio the distance is an easy 20 miles.

Palm Springs area sights are not confined to bikini-clad lovelies around any of the scores of public swimming facilities—in motels and palatial resort spas—but include one of the world's greatest collections of natural palm can-

yons. Palm, Andreas and Murray canyons together comprise the largest number of these stately trees north of Laguna Salada, near Mexicali, Mexico.

Unfortunately, you'll be able to visit only the Indian-owned groves in lower Palm Canyon, but they're well worth the toll and short hike. A running stream and a constant light breeze combine to create a symphony of restful sounds that will take you literally a hundred miles from the hustle and hurry of downtown Palm Springs just three miles away.

We've saved the Palm Springs Aerial Tramway—gateway to the Mt. San Jacinto high country—for last. Not because it's best, but certainly unusual.

The graceful tram rises from the 2,643-foot Valley Station in Chino Canyon to 8,516 feet at the cantilevered Mountain Station above Long Valley. Attractions of the thrilling ride, the wonderful views and the awesome engineering represented are only part of the story.

The tram offers the occasional hiker the best way to reach the San Jacinto high country. Utilizing the giant first step of the two Swiss-built tramcars, a hiker can reach the peak in less than four easy hours.

It's only five miles from Mountain Station to the peak, as compared to a more than 20-mile round trip from Humber Park trailhead, above Idyllwild, and the hike can be done, leisurely, in three hours. A full day's hiking utilizing the tram can also include a side trip to Hidden Lake and a restful lunch stop in Round Valley at state camping facilities there.

Anything more than a hike from the Tramway will require a state park reservation for overnight use of the San Jacinto wilderness area.

There are many more leisure-time lures in the Coachella Valley wonderland and your ingenuity in searching them out—from date processing to visiting one of several museum and natural history centers—will be well-rewarded.

To name three, try the famed Palm Springs Desert Museum, in downtown Palm Springs, Cabot Yerxa's sprawling Indian pueblo near Desert Hot Springs, or the informative Living Desert Reserve just south of Palm Desert.

The list is seemingly endless, varied and stimulating for the one-day or several-week winter visitor. Good Touring! □

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RUM-DATE BARS

FILLING:

1 1/2 cups chopped dates
1/2 cup water
1/4 cup sugar
pinch salt

Boil the above ingredients for 5 minutes, or until thick. Remove from stove and add 1 teaspoon rum flavoring and 1/2 cup chopped nuts.

CRUST:

1 cup flour
1/2 teaspoon soda
1/4 teaspoon salt
1 cup uncooked rolled oats
1/2 cup brown sugar
1/2 cup oleo

Mix together flour, soda and salt, add oats and brown sugar. Work in oleo until mixture is crumbly. Put half of this mixture into 9x9 pan. Spread date filling on this layer and add remaining crust on top. Press down and bake in 350 degree oven 40 minutes. Cool and cut into squares.

Recipes for M'Lady

by HELEN PETERSON

ONE-STEP DATE POUND CAKE

Combine in mixing bowl:

2 1/4 cups flour
1/2 teaspoon soda
1/2 teaspoon salt
2 cups sugar
3 eggs
1 cup butter—or oleo (soft)
1 teaspoon vanilla
1 teaspoon rum flavoring
1 8-ounce carton yoghurt
(or 1 cup sour cream)
1/2 cup finely chopped dates

Blend all ingredients at low speed for 3 minutes. Bake in greased and floured bundt pan 60 to 70 minutes at 325 degrees. Cool upright for 15 minutes. Remove from pan and when cool—glaze.

GLAZE

1 cup powdered sugar
1 teaspoon melted butter—or oleo
1-2 tablespoons water
1/4 teaspoon rum flavoring

PUMPKIN-DATE PIE

1 1/2 cups pumpkin
2 tablespoons molasses
1 teaspoon cinnamon
1/2 teaspoon nutmeg
1/2 teaspoon ginger
3 eggs (beaten)
1 cup milk
1 1/4 teaspoon sweet 10
1/2 teaspoon rum extract
1/2 cup chopped dates

Mix ingredients together and fill oatmeal pie crust and bake 45 minutes in 350 degree oven.

OATMEAL PIE CRUST

1 cup oat flour (rolled oatmeal)
1/2 cup oleo, or shortening
1/2 teaspoon salt
2 tablespoons water—or enough to roll dough



Jammi Biby, 1977 Princess for National Date Festival, admires this crystal cluster typical of fantastic exhibits that will be displayed in Festival's big Gem and Mineral Show, one of the nation's largest and most diversified, displayed in one huge exhibit building during 10-day run of 1978 National Date Festival, Feb. 17 thru 26, in Indio.

CALIFORNIA'S FIRST major exposition of the year will again be presenting its unusual and colorful "Arabian Nights" theme when the 1978 Riverside County's National Date Festival goes into its 10-day run, February 17 through 26, at Indio, California.

Special event for the first weekend will be the big Arabian Street Parade starting at 10:30 a.m., Monday, February 20, the official Washington's Birthday holiday.

One of the major daily entertainment attractions will be the free evening performances of the Arabian Nights Pageant, a spectacular outdoor musical production starting at 6:45 nightly with an extra performance on both Saturdays.

Another is the daily afternoon National Horse Show competition in the main arena, one of the most competitive and colorful in the west. The festival's hilarious camel and ostrich races are intermission attractions.

The festival's three Senior Citizen Days are February 21-22-23, featuring a kitchen band contest the first day, banjo fiddle and mandolin contests the second

day, and blue grass band competition on the final day.

The colorful "Salute to Mexico," presenting South-of-the-Border music and dancing, is set for 12 noon to 3:45 p.m., Sunday February 26, final day of the festival.

Grand finale for this same Sunday—the final day of the festival—will be the spectacular fireworks and musical presentation eight gigantic Mexican-American scenes set to music with colorful aerial barrages and pyrotechnic displays. Intermission attractions will be a live mariachi band and trick horses. This event starts at 8:30 p.m. in the main arena.

Thousands of exhibits include elaborate date and citrus feature displays, the big gem and mineral show, photo salon, fine arts, flower and garden show and many other departments.

Gates to fairgrounds will be open 10 a.m. to 10 p.m. Grounds admission will be \$2 for adults; Children (6-12), \$1; Children under 6 free when accompanied by adult relative. Official fairgrounds parking \$1 all day. □

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CALIFORNIA PALM OASES

Hidden Spring

by DICK BLOOMQUIST



HIDDEN SPRING lives up to its name. Well concealed until the last moment within a small tributary wash, this delightful oasis surprises the desert explorer with its sudden display of green-thatched palms. From Sheep Hole Palms it is about one and one-half miles to Hidden Spring over a route that winds through a fascinating corner of the Colorado Desert. Follow the wash for perhaps a third of a mile below Sheep Hole; a trail will then be seen climbing a ridge on the left side. Take this path into broad Hidden Spring Canyon and follow the watercourse upstream (left). Soon the canyon walls will close in, rising 60 feet or more on both sides of the arroyo.

Just beyond these narrows a medley of hues highlighted by a zigzag band of yellow enlivens the right side of the gorge. Lavender and red, grey and white are among the other tints. My visit was during the very early morning when canyon colors were muted; later on they would be transfigured beneath the white light of the sun.

Opposite this tapestry in stone, a tributary flanked by massive red-grey rock-work joins the main canyon. The entrance is very tight—only seven or eight feet wide—and is pocked with drill holes made in the 1940s when the builders of the nearby Coachella Canal were seeking rock for construction purposes. Fortunately, no blasting was done. A large ironwood on the right slope just inside the portal also helps to identify this unique tributary. (A third of a mile or so up the main channel beyond the Hidden Spring fork, another tributary comes in on the left. It contains the Grotto, where fallen rock has created a series of coal-black tunnels along the narrow floor of the ravine.) After a few yards huge chunks of conglomerate appear to block the way,

but a trail easily bypasses them. Then, with forceful suddenness, the palms jump into view just ahead—35 Washingtonias with emerald crowns, tawny skirts and ebony trunks. Two clumps 50 or 60 feet apart make up the little grove, with 21 trees in the lower group, 14 in the upper.

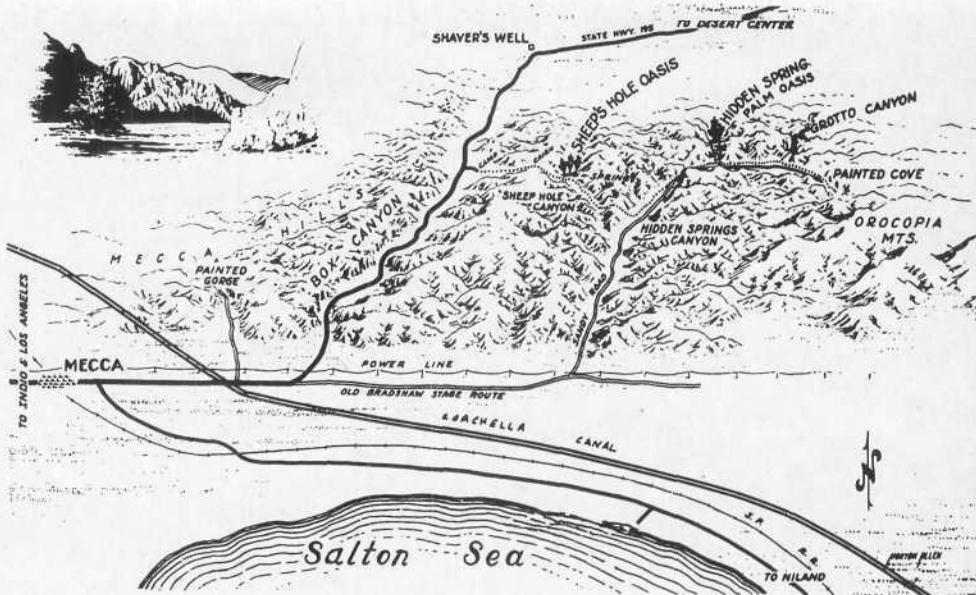
The tallest palms, which range up to 35 feet in height, rise in the rear cluster, and it is here, too, that cool water

Mileage Log

- 0.0 Junction of State Highways 111 and 195 near Mecca a few miles north of the Salton Sea. Drive east on 195 toward Box Canyon.
- 4.7 Cross Coachella Canal. The highway enters Box Canyon a short distance beyond the canal.
- 10.1 Junction. Turn right off Highway 195 onto dirt road. (For those coming from the opposite direction on 195, the turn is two and three-tenths miles west of Shaver's Well, which is identified by a Riverside County historical marker and a clump of tamarisk trees.)
- 10.2+ Dirt road ends near two large ironwood trees at mouth of a small Box Canyon tributary wash. The trail to Sheep Hole Palms—less than a mile in length—climbs the right slope of this tributary. After reaching Sheep Hole oasis, continue down the wash for a third of a mile or so until a trail climbs out on the left side. Follow this trail over a low ridge into Hidden Spring Canyon, then walk upstream (left) for approximately two-thirds of a mile until the canyon walls grow steep and narrow. Just beyond the "narrows" a small arroyo only seven or eight feet wide bordered by grey and reddish rock comes in from the left. Hidden Spring (elevation 680 feet) lies a few hundred feet up this tributary beyond a pile of boulders. One-way hiking distance from Box Canyon nearly two and one-half miles, and from Sheep Hole Palms one and one-half miles.

reaches the surface. A wooden lid with a metal door in it covers the spring, which is about a foot deep. Water trickles down below the pool for a short distance. At the lower cluster glistening droplets and several damp spots hint at the greater moisture concealed beneath the surface. Alkali rimes the ground in many places near the palms.

As at Sheep Hole, plant life is scattered very thinly at Hidden Spring. The palms rise in solitary splendor, and the surrounding terrain contributes only a little mesquite, ironwood, palo verde, creosote, brittlebush and desert holly. I did come upon one aster in full bloom



upstream from the oasis, its large lavender-and-yellow flowers contrasting sharply with the buff-colored slopes.

There are 27 mature trees and eight younger ones at Hidden Spring today, and one dead trunk still stands. Although the number of palms has decreased slightly over the last several years, the grove appears to be in good

health, with abundant water at its roots.

The route from Box Canyon to Hidden Spring via Sheep Hole Palms is one of extraordinary richness. But our next oasis, Travertine Palms on the western rim of the Salton Basin, will not suffer by comparison. It, too, offers many of the physical realities and elusive moods which give the desert its lure. □

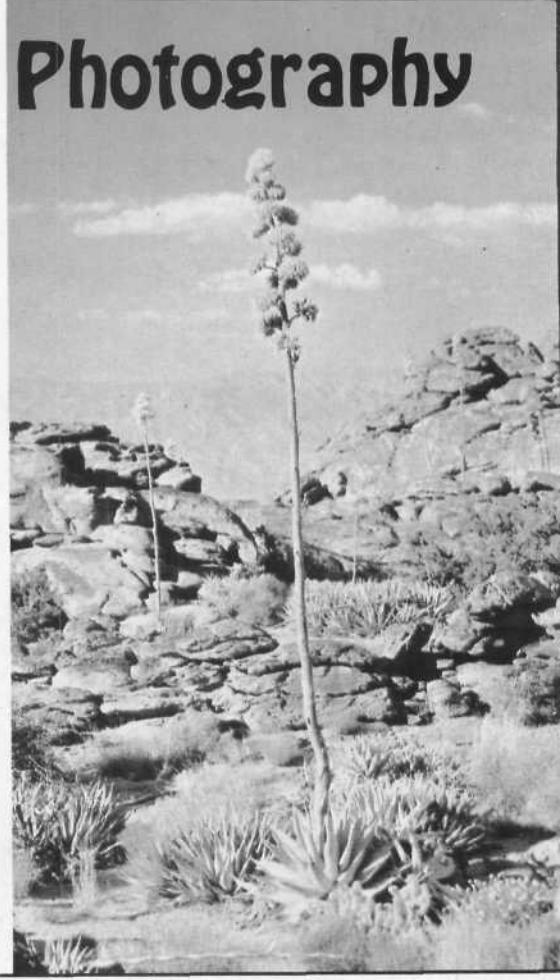
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WILDERNESS TREK

Continued from Page 11

hikers, it seems, approach Rabbit from the southern end of the ridge via Villager Peak (my return route); although some opt for the shorter, but more demanding climb from Coachella Valley.

Now, with only ten miles remaining, I was "home free." A well-defined ridge, complete with vestiges of a lightly-worn trail, led directly to Villager Peak (elevation 5,756 feet), three miles away. Again, I attended to the formality of signing in here too.

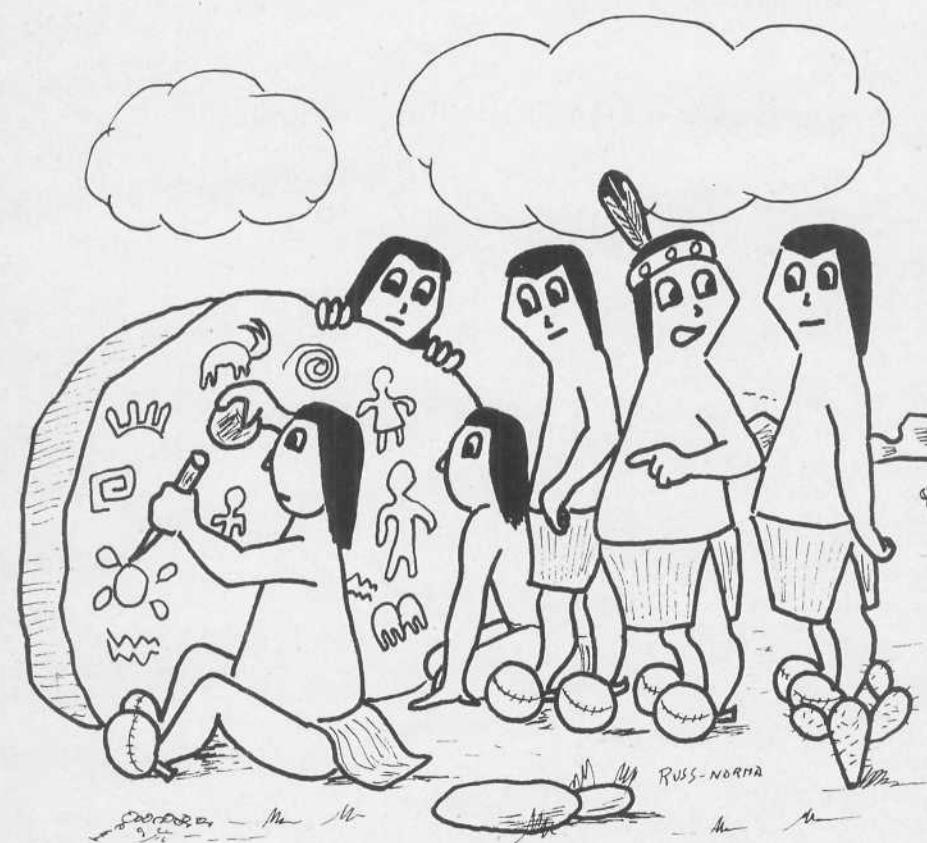
The final segment of the trip bridged the gap between the high and low deserts of the Anza-Borrego by a ridge route that appears quite obvious on topographic maps. The descent along the knife-edge spur just south of Villager Peak was decidedly the most spectacular part of the entire hike. Seen from here, the



Sunrise in the Santa Rosa Mountains near Rabbit Peak.

MANY MOONS

by RUSS & NORMA McDONALD



"THAT'S THE TROUBLE WITH MODERN JOURNALISM,
ONLY THE SENSATIONAL SELLS."

western slope of the ridge plunges abruptly to the floor of Clark Valley, with elevation losses of over 3000 feet to the mile. Alluvium, carried off these slopes, has been deposited in smooth fans around the perimeter of Clark Dry Lake. On the lake bed itself, I could glimpse the sprawling antenna array of University of Maryland's radio observatory.

Agave appeared in increasing numbers below the 5,000-foot contour; then at 2,500 feet it gave way to typical denizens of the rocky lower desert. Widely-spaced ocotillo, hedgehog and barrel cactus, and even the vicious cholla were a welcome sight after two days of coping with unyielding barriers of chaparral.

I arrived at Borrego-Salton Sea Way late in the afternoon, and found my friend waiting patiently with the car. It had taken only 48 hours to walk the 40 miles from Palms-to-Pines Highway.

I ended my desert journey hot and thirsty, with knees aching from hours of constant downhill jolting. But I came out with a smile on my face. I had seen the Santa Rosa Mountains from top to bottom and end to end as few have seen them. And I've returned to the city with images of wise and windswept pinyon pines, humble cacti rooted in rock or sand, and blazing sunsets forever etched in my memory. Now that I know it can be done, I'll go back someday to savor the delights of this rim of the desert at a more leisurely pace. □

Letters to the Editor

Letters requesting answers must include stamped self-addressed envelope

Wonderful Memories . . .

Just a note to tell you how much the November issue meant to me. It brought back so many memories of my old home country, Inyo County, California, where I grew up and spent many years.

It also brought back memories of my old friend, "Shorty" Harris (Frank) whom I knew as a child in those boom days—1900s. I saw him last in Ballarat June 2, 1931. We talked of the old days and took his picture with my two sons in front of the old adobe schoolhouse in Ballarat where he was living and where he became ill in 1934.

I also loved the story on Leadfield. We camped three days in the boarding house while the boys went down the shaft of the mine to the stope that had been opened and beautiful stalactites and stalagmites were in abundance. That's all the "gold" the miners and Julian found! His record was shady to say the most.

We drove down Titus Canyon and into Death Valley—sheer walls in places just wide enough for the cars to get through. The front building is the one we camped in. Never again will we see those fine oldtimers. I knew so many when I was young, and what characters some of them were.

I loved the photo of Shorty's grave in this issue, and have always enjoyed Harold O. Weight's fine articles.

A LONG-TIME SUBSCRIBER.

Old Fort Correction . . .

I have just finished reading and thoroughly enjoying your December issue of *Desert Magazine*. I must, however, take exception to a couple of statements by author Joe Kraus in his article, "Old Forts of Southern Arizona."

He notes that Fort Grant is "probably remembered more for what became known as the Camp Grant Massacre than anything else." The fact that there were two Camp Grants no doubt leads to such a misunderstanding since some historians fail to distinguish between the two or even admit existence of one or the other. The "Camp Grant" of the Camp Grant Massacre was located on a low plateau above Aravaipa Creek near where it joined the San Pedro River. It was first established in 1856 as Fort Breckenridge and "Old Camp Grant" as it later was

Calendar of Events

MARCH 4 & 5, 19th annual Gem and Mineral Show sponsored by the Monrovia Rock-hounds, Inc., Masonic Temple, 204 West Foothill Blvd., Monrovia, Calif. Dealer spaces filled. Show Chairman: Betty O'Reilly, 1001 S. Vega St., Alhambra, Calif. 91801.

called was erected on the dilapidated walls of the former fort.

What has been referred to as "New Camp Grant" was located in Graham County on the west slope of Mount Graham, the site of what evidently became Fort Grant.

When I first visited Old Camp Grant 10 or 15 years ago there were still adobe walls standing as well as a well-defined and fenced cemetery. Subsequent visits have failed to reveal any trace of the original site; highway builders and perhaps private landowners have wiped out all traces, leaving nothing to mark this historical site. A few hundred yards up the Aravaipa Canyon road from the Camp Grant site is the campus of the Arizona College of Technology. Perhaps before the ever-expanding school completely covers it someone will set aside a little spot of land to mark where the camp was.

HENRY G. HART,
Torrance, California.

More on the White Papoose . . .

Regarding the Lost White Papoose Mine article in the December 1977 issue, on a recent visit to the Sheep Tanks near North Fork Palm Wash in the Santa Rosa Mountains, I noted and photographed the inscription "Water H. D. O'Neill March 9, 1899" on the canyon wall nearby. Unfortunately, the inscription seen today is not historical. On page 139 of Horace Parker's out-of-print *Anza-Borrego Desert Guide Book*, Third Edition, there appears a photograph of the same spot taken in March 1956. The inscription reads "Water Found by N. N. Nunn & H. D. O'Neill March 9, 1889" with an arrow pointing toward Sheep Tanks. Horace Parker notes that "this historical inscription has since been mutilated or obliterated." In my photograph it is evident that the original message was chipped away, exposing patches of unweathered sandstone. A modern hand has re-inscribed part of the message on the fresh sandstone, though the lettering style was not preserved.

Exploring on the rimrock above Sheep Tanks, I found a total of six tanks, not three as mentioned in the article. The upper five appear inaccessible to wildlife, with the possible exception of birds and amphibians.

JERRY SCHAD,
La Mesa, California.

MARCH 10-12, Second Annual Deming Rockhound Round Up, sponsored by the Deming Gem and Mineral Society, Deming, New Mexico. Field trips, swapping and tailgating. Ample free parking without hookups. Chairman: Elmer Boehm, 601 Mimbres St., Deming, New Mexico 88030.

MARCH 11 & 12, Annual Spring Parade of Gems, Elks Lodge, 1000 Lily Hill Dr., Needles, California. Dealer space filled. Chairman: Roy Brossard, Needles Gem & Mineral Club, P. O. Box 762, Needles, CA 92363.

MARCH 11 & 12, The Santa Ana Rock & Mineral Club will host its show, "Stone Age '78," at the Carpenters Hall, 2829 W. First St., Santa Ana, California. Contact: Elmer Child, 41 Maui, Santa Ana, California 92804.

MARCH 12, annual Desert Garden Walk of the Anza-Borrego Committee, Visitors Interpretive Center site near Anza Borrego Desert State Park headquarters. The Visitors Center site is a short distance west of Borrego Springs, California. Ample parking space. Wear walking shoes, sun shade hat, bring lunch and water. State Park Rangers will give guided nature and archaeological walks after the dedication program at the site. Call (714) 767-5311 for further information.

MARCH 17-19, 18th Annual Southwest Gem & Mineral Show, Villita Assembly Hall, 401 Villita Street, San Antonio, Texas.

MARCH 18 & 19, Dinuba, California Sequoia Mineral Society's 40th Annual "Gem Roundup," Dinuba Memorial Building, Dinuba, California. Dealer space filled. Chairman: Sam Carlson, 2102 Merced St., Selma, Calif. 93662.

MARCH 18 & 19, 11th Annual River Gem-boree, "Rocks in Bloom," sponsored by the Silvery Colorado River Rock Club, Junior High School, Hancock Rd., Holiday Shores, Bullhead City, Arizona, Demonstrations, dealers, field trips, displays. Parking and admission free.

MARCH 19-26, Annual Phoenix 4-Wheelers "Roundup," Wittmann, Arizona. Contact: John Welch, 3126 W. Columbine Dr., Phoenix, Arizona 85018. 602-993-9805.

MARCH 25 & 26, Roseville Rock Rollers' 7th Annual Gem and Mineral Show, "Nature's Wonders," Placer County Fairgrounds, Main Exhibit Hall, Hwy. 65 & All American Blvd., Roseville, Calif. Admission, 50c. Exhibits, dealers, demonstrations, ample parking.

CALIFORNIA

BY RAY ATKESEN AND DAVID MUENCH



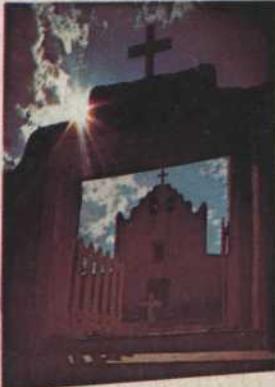
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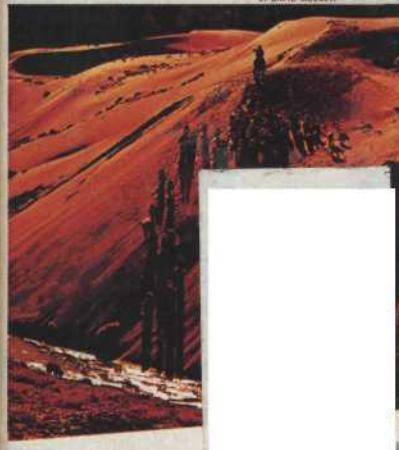


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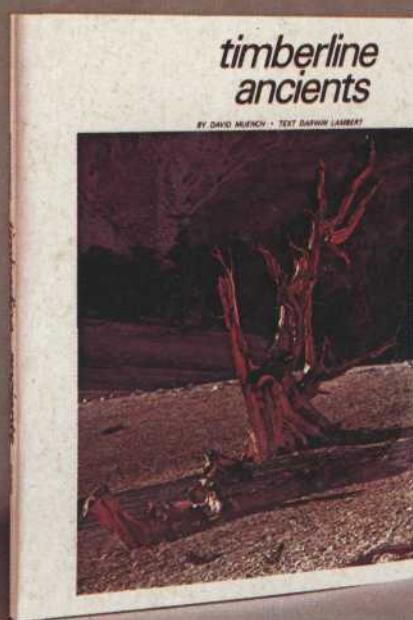
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